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Does the euro entail closer political integration? It need not and should not—but probably will … More on this week's lead article

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Politics this week

Jan 3rd 2002
From The Economist print edition

Third time lucky?

Argentina got its third government in a fortnight. Congress chose Eduardo Duhalde, a Peronist senator, to serve as the country's president until 2003, abandoning a plan for an election in March. Protests and looting had forced out Fernando de la Rua; his successor, Adolfo Rodriguez Saa, lasted only eight days. The new government was expected to scrap the country's currency board, which pegs the peso to the dollar.

See article: Argentina's new new president

Almost 300 people were killed when a fire swept through a crowded shopping area in Lima, **Peru's** capital. The fire began when a firework exploded, igniting tonnes of other fireworks on sale in the area.

See article: Peru's firework inferno

Mexico's Congress approved tax rises worth about 1.2% of GDP, but rejected long-standing proposals from President Vicente Fox to levy VAT on food and medicine.

See article: A defeat for Mexico's Fox

A war postponed?

AP

The threat of a fourth war between **India** and **Pakistan** eased slightly. India welcomed Pakistan's detention of the leaders of two groups said to have been involved in an attack on the Indian Parliament on December 13th, an event that triggered the new hostility between the two countries. But troops from both sides continued to exchange fire across their border in Kashmir, whose future has long been in dispute.

See article: Will India and Pakistan resist war?

Calls for an end to bombing in **Afghanistan** intensified, after an American attack killed more than 100 people in the village of Qalaye Niazi.

See article: A long cold trail

Australia's biggest bushfires for eight years destroyed more than 150 homes in New South Wales. Some fires reached the outskirts of Sydney. Police detained 21 people suspected of arson.

See article: Australia's deadly fires

Sri Lanka ended a ban on most goods destined for areas controlled by the separatist Tamil Tigers as a gesture designed to start talks to end the 18-year civil war.

Over 30 people reportedly died in an explosion at a fireworks factory in Huangmao, in south-east **China**. Poor safety standards were blamed.

Putin on the line

AP

For more than two hours, **Vladimir Putin** answered ordinary Russians' questions—selected from more than 500,000 sent in—on a television phone-in.

In **Berlin**, the local Social Democrats and reformed communists agreed to form a coalition government for the city-state.

After a miserable 2001, a majority of **German industry associations** predicted that sales would be stagnant or even lower in 2002.

See article: Germany and France, both sputtering

In **Britain**, plans for police reform—notably to reduce the burden of early retirements on full pay—met vigorous opposition from the ranks. It was bought off with promises of better pay.

More killing than calm

Anthony Zinni, America's envoy, returned for a short visit to the **Middle East**, to press Israel and the Palestinians to agree to a ceasefire. But Ariel Sharon reiterated his demand for seven days of absolute calm before considering it. Although the level of violence has dropped since Yasser Arafat called for an end to all fighting, clashes continue: six Palestinians were killed in Gaza in a single day.

A plan by Israel's president, **Moshe Katsav**, to address the Palestinians' parliament was quashed by Israel's prime minister.

Iranians took to the streets to protest at the continuing imprisonment of their reformist deputies. Some 60 members of **Iran's parliament** are currently being prosecuted for expressing their opinions.

A presidential election in **Madagascar** went to a second round after neither the incumbent, Didier Ratsiraka, nor his opponent, Marc Ravalomanana, a yogurt tycoon, had succeeded in winning a majority.

In South Africa, 48 people, mostly from the same family, were killed in a **truck crash** on the way to visit ancestral graves.

Pino Arlacchi resigned as head of the **UN's drug-control agency** after much criticism of his administration and, in particular, a proposed round-the-world boat trip designed to promote drug awareness.

EPA

Levy Mwanawasa, the protégé of his predecessor, Frederick Chiluba, was sworn in as **Zambia's new president**, after narrowly winning an election his rivals said was rigged, foreign observers agreed was flawed but was contested by an opposition split into ten parties.

See article: Zambia's disputed election

New York, new mayor

Michael Bloomberg, a billionaire businessman and political novice, was sworn in as New York's 108th mayor. He vowed to continue the work of Rudy Giuliani in rebuilding the city in the aftermath of the September 11th terrorist attacks.

See article: From Giuliani to Bloomberg

The alleged “20th hijacker” in the September 11th attacks, **Zacharias Moussaoui**, refused to enter a plea to charges linking him to the plot. He was arrested for immigration violations in August.

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Business this week

Jan 3rd 2002
From The Economist print edition

The euro arrives

Amid much fanfare, 12 European countries introduced **euro** notes and coins as a replacement for national currencies. Most governments presented this as a further large step towards European integration. Early indications suggested that the rapid “big bang” method had proved largely successful. Britain, a euro outsider, appeared to warm to adopting the euro sooner rather than later.

See article: The tangible arrival of the euro

Wim Duisenberg confirmed that his tenure as head of the European Central Bank would continue for at least another year. He was said to have promised not to serve a full eight-year term (due to end in 2006) when he was appointed in 1998, before the introduction of the euro. France had hoped he would depart sooner; its candidate, Jean-Claude Trichet, waits impatiently to take over.

Six **Gulf states**, Bahrain, Qatar, Kuwait, Oman, Saudi Arabia and the United Arab Emirates, agreed to set up a customs union by 2003 to hasten a trade pact with the EU. Perhaps noting Europe's example, they also announced plans to adopt a single currency by 2010.

Running out of credit

Credit Suisse First Boston announced that its chairman, Joe Roby, would step down two years earlier than planned. Mr Roby had been boss of Donaldson Lufkin & Jenrette, a stockbroking firm acquired by the investment bank for a pricey $11.5 billion in mid-2000.

J.P. Morgan Chase was reported to have cut bonuses for its bankers by an average of 40%. Morgan Stanley and Goldman Sachs are expected to cut bonus payments by similar amounts.

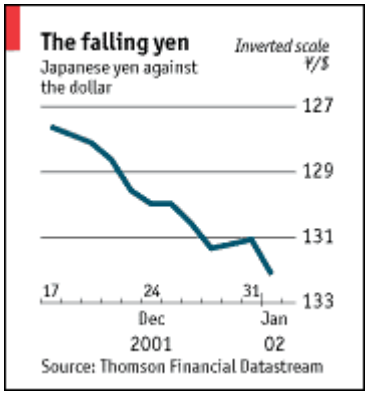
Deutsche Bank responded to continuing economic uncertainty by announcing plans to cut a further 2,100 employees from the bank's payroll, bringing the total of lay-offs so far to 9,200.

The new boss of **Lazard**, Bruce Wasserstein, marked his first day in the job by increasing the number of partners in the bank by one-third and distributing permanent equity to them. Mr Wasserstein also declared that the fiercely competitive London, Paris and New York branches of Lazard were now “one firm”.

The **yen** continued its decline, sinking to a three-year low against the dollar as the parlous state of the Japanese economy became ever more apparent. Industrial production figures drooped to a 14-year low.

See article: The yen on the slide

The world's main **stockmarkets** closed out 2001 with losses over the year. In the 12 months to December 31st 2001, the Dow Jones Industrial Average fell by 7%; London's FTSE-100 index fell by 16%; Tokyo's Nikkei 225 fell by 23.5%; Frankfurt's Xetra-Dax index fell by 20%; and Paris's CAC-40 index fell by 22%. All five markets had also registered losses in 2000.



Cheers

Adolph Coors, America's third-largest brewer, agreed to stump up £1.2 billion ($1.7 billion) for **Carling**, Britain's biggest-selling lager, and some lesser brands. Interbrew, a Belgian brewer, was forced to sell Carling to win approval from Britain's regulators for its take-over of Bass, Carling's former owner.

Yahoo!, an Internet portal, agreed to pay some $436m in shares and cash to buy **HotJobs.com**, an online recruitment company. TMP Worldwide, owner of Monster.com, a rival online job site, had declined to improve on its own earlier bid for the company.

It was revealed that the **New York Stock Exchange** had levied its largest fine ever on Enrique Perusquia, a former stockbroker at PaineWebber, for “acts of fraud, forgery, breach of fiduciary duty, embezzlement, self-dealing and other heinous acts.” Mr Perusquia was ordered to pay $429m.

America West Airlines was handed $380m in loan guarantees as part of a $15 billion federally funded bail-out of the country's airlines. Its shares rose by 42%; shares in other airlines that are expected to get help were also lifted.

American retailers, including Wal-Mart, J.C. Penney and Federated Department Stores, which owns Macy's and Bloomingdale's, mainly reported that sales over the Christmas period had exceeded their admittedly gloomy forecasts; but they were well down on the same period a year ago.

America Online, part of AOL Time Warner, reported that **online retail sales** in the fourth quarter were 72% up on a year earlier. Other Internet retailers reported similar increases.

Frozen assets

Nestlé, the world's largest food company, agreed to pay **General Mills**, an American rival, $641m for the 50% of **Ice Cream Partners** that it does not already own. The deal lands Nestlé with ownership of the premium Häagen-Dazs brand, a powerful weapon in its bid to challenge Unilever in the luxury ice-cream market.

Queen Elizabeth is to become the first British monarch to break with a tradition that Rolls-Royce supplies the official royal limousine. Bentley, owned by Germany's Volkswagen, will give her a custom-made model as a golden jubilee gift this year. BMW, owners of the Rolls-Royce marque, are said not to be amused.

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A diary for 2002

Jan 3rd 2002
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January

Europe's single currency rolls out in physical form in 12 countries. National currencies remain usable for up to eight weeks.

Spain takes over the EU presidency for six months.

Mexico, Cameroon, Guinea, Bulgaria and, controversially, Syria join the UN Security Council for two years.

Parliamentary elections take place in the Gambia and Lesotho.

The World Economic Forum goes off-piste, meeting in New York rather than the Swiss ski resort of Davos. A rival, the World Social Forum, meets in Porto Alegre, Brazil.

February

Salt Lake City, the state capital of Utah, hosts the Winter Olympic Games.

Costa Rica holds a general election. Laos elects a new National Assembly.

The Chinese Year of the Horse comes out of the starting gate.

March

Parliamentary elections take place in Colombia, Ukraine, Chad, and the Bahamas. Zimbabwe holds a presidential election. Hong Kong's chief executive, Tung Chee-hwa, is likely to be re-elected by the grace of Beijing, despite his unpopularity.

Alliance-shy Switzerland holds a referendum on UN membership.

The EU holds a summit in Barcelona to build on the Lisbon agenda intended to make Europe the world's most competitive economy by 2010. Some hope.

Commonwealth heads of government meet in Australia, an event postponed last year after September 11th.

The UN holds its first summit on finance for development in Monterrey, Mexico. The World Bank, IMF and World Trade Organisation are among the expected participants.

April

Hungary goes to the polls in a parliamentary election.

Election fever in France, with the first round of the presidential vote. The second round takes place in May. Whoever wins will serve for five years rather than seven.

May

Colombia holds a presidential election. Sierra Leone does the same if civil war does not re-erupt. The Dutch also hold a general election.

EU and Latin American representatives meet in Madrid. The European Bank for Reconstruction and Development meets in Bucharest.

June

France holds two rounds of voting for a new National Assembly. Bolivia holds a presidential and parliamentary vote. The Czech Republic, Algeria and Papua New Guinea hold parliamentary polls. And Ireland should have held a general election and a second referendum on the Treaty of Nice by now.

Hoping for a quieter time than in Genoa last year, the leaders of the G8 countries barricade themselves into Kananaskis, in the mountains of Canada's Alberta province, for their annual summit.

Britain celebrates Queen Elizabeth's golden jubilee.

A summit in Seville rounds off Spain's six-month tenure of the EU presidency. Denmark takes over.

July

International goodwill comes to the north of England as Manchester plays host to the 17th Commonwealth Games.

Puerto Rico marks 50 years as a commonwealth of the United States. Egypt celebrates the 50th anniversary of a revolution that eventually brought Gamal Abdul Nasser to power.

August

The 25th anniversary of Elvis Presley's supposed death is marked by a tribute week in Memphis, Tennessee.

Japan commemorates its 3m dead in the second world war. The attendance of the prime minister, Junichiro Koizumi, at the Yasukuni shrine, where convicted war criminals are among those honoured, may again prove controversial.

September

Bosnians elect their three-person presidency. Parliamentary elections are set to take place in Sweden and Slovakia.

Germany goes to the polls. At present, pollsters fancy the chances of Chancellor Gerhard Schröder and his Social Democrats to win again.

Russia holds its first census since the break-up of the Soviet Union.

The Chinese Communist Party holds its 16th five-yearly congress. Jiang Zemin is expected to step down as secretary-general.

Mike Moore steps down as head of the WTO. He is due to be replaced by Supachai Panitchpakdi, a former

deputy prime minister of Thailand.

A UN conference on sustainable-development, a follow-up to the 1992 Rio summit, is held in Johannesburg.

October

Presidential and parliamentary elections in Ecuador, and in Brazil, where Fernando Henrique Cardoso, having served two terms as president, is barred from standing again.

The Asia-Pa

cific Economic Co-operation countries meet in Mexico.

The IMF and World Bank hold their annual meetings in Washington, DC.

World Space Week sees an earthbound get-together of the World Space Congress in Houston, Texas.

November

The United States elects a new House of Representatives, a third of the Senate and 36 state governors.

A presidential election takes place in Slovenia; Morocco holds a parliamentary one.

NATO meets to discuss, among other things, whether to take in more countries to the east.

December

South Korea holds a presidential election.

Greece takes over the EU's six-month presidency from Denmark.

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The euro

Europe's big idea

Jan 3rd 2002
From The Economist print edition

Does the euro entail closer political integration? It need not and should not—but probably will

Get article background

IS IT the end, or the beginning? A single currency for Europe was dreamed of by Charlemagne and Napoleon. Plans for one were formed then abandoned in the 1970s. The decision to go ahead was eventually taken at a European Union summit in the Dutch town of Maastricht in 1991. This week new notes and coins were issued in the euro area's 12 countries. From Lapland to the Azores, the single currency is a reality.

Onlookers, groping to capture the significance of the event, note that no currency has circulated so widely in Europe since the Roman empire. It is a provocative comparison, for it raises the biggest political question about the venture. Will the euro, the most dramatic building-block so far in the making of a new Europe, inexorably lead to a pan-European political union? Or is it just a convenient currency and nothing more?

The urge to unite

Defenders of the “just a currency” line point out that countries can share a currency without political unity. The gold standard, a de facto common currency, operated for decades without any impulsion towards a political union and indeed through several wars. On a smaller scale, Britain and Ireland long shared a currency, as did Belgium and Luxembourg, as do a clutch of West African countries—with no suggestion that monetary marriage should inevitably lead to political fusion. Yet others respond that currency unions that do not follow on to political union tend ultimately to break up. A Latin Monetary Union prevailed among France, Belgium, Italy, Switzerland, Greece and Bulgaria from 1865 until 1914, for instance, but came to grief with the first world war.

Many eminent European leaders do indeed believe that the euro is not merely a symbol of European unity but also the potential instrument to drive a whole new round of political integration. Joschka Fischer, Germany's foreign minister, argued in a speech last year that the creation of the euro was “a profoundly political act”. The European Union, in his view, must now “make good the shortfall in political integration”.

It is one thing to talk in general terms about the euro spurring closer integration. The controversial question is, “What sort of integration?” One popular idea, promoted by both Lionel Jospin, the French prime minister, and Romano Prodi, the head of the European Commission, is the appointment of a Mr Euro, a single economic spokesman, who could speak in international economic forums for the entire euro-zone. Other ideas floated recently by several European politicians include the harmonisation of corporate and other taxes, and the creation of a bail-out fund to help countries in economic trouble.

The idea of such a fund is an illustration of how supporters of the euro hope to turn it into an opportunity for further integration. Mr Prodi says openly that the lack of economic flexibility in the euro-zone means that “some day there will be a crisis and new economic-policy instruments will be created.” He is right that options open to countries with a national currency, notably devaluation and an independent monetary policy, are no longer open to members of the euro-zone. So what new forms of flexibility might they therefore need? Mr Prodi is vague, but he seems to imply that the Union should greatly increase its central budget, so that any country hit by a shock unique to itself could be bailed out.

An odd kind of flexibility. And odd for the head of the European Commission to speculate openly about the risk of an economic crisis in the euro-zone. But pro-Europeans know well that an atmosphere of crisis can generate just the right mood for great leaps forward in political integration. Consider, for example, how September 11th created the political momentum for the creation of a pan-European arrest warrant.

The problem with this crisis-driven model of integration is that crises are by their nature unpredictable. At present, the euro country that looks likeliest to hit trouble lies at the heart of Europe: Germany, which is struggling to keep its budget deficit below 3% of GDP. The 3% figure is crucial because the euro countries have donned a fiscal straitjacket called the stability and growth pact, which is intended to prevent any one country running up debts that undermine confidence in the euro. Adopted, ironically, at Germany's behest, the pact provides that any country breaching the 3% ceiling could be subject to fines as big as 0.5% of GDP. There are let-out clauses for deep recessions, but Germany looks unlikely to qualify.

Fines on the scale laid down in the stability pact look unthinkable—but if a breach of the limits went unpunished, the infant currency could suffer a big blow to its credibility. The trouble is that the stability pact, far from creating more of the flexibility that Mr Prodi craves, actually creates less. The true flexibility that Europe needs ought to come from scrapping remaining barriers to competition and further deregulating labour and product markets—changes that many governments, including Germany's, are resisting.

Time to digest

The same flexibility test should be applied to plans for closer “political union”. The notion that the euro would impel closer political integration was not spelled out when the members of the euro-zone first agreed to the idea of a single currency. To suggest that it is now necessary is another example of the sleight-of-hand that has done so much to undermine popular faith in the European Union. If the euro-zone countries want to introduce greater flexibility, they should look at their excessive regulation, not at more political integration.

It is true that previous currency unions have foundered for lack of a political union. But Europe, let us hope, is unlikely ever again to face an “asymmetric shock” as strong as German unification or a major continental war. The euro is a powerful symbol of European co-operation. With luck it will bring more economic benefits than losses. Long may it flourish. But that is not to say that Europe must now proceed to closer political union. On the contrary, the union has a new currency to digest, a dozen would-be members knocking on the door, and a public whose support for these already-ambitious initiatives is wavering at best. Until further notice, enough is enough.

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The value of science

With all thy getting, get understanding

Jan 3rd 2002
From The Economist print edition

Science is a celebration of the human spirit

IN 1969 Robert Wilson, the first director of Fermilab, a big American particle-physics facility, was asked by Congress what his new laboratory would contribute to America's defence. He replied: “This new knowledge has all to do with honour and country, but it has nothing to do directly with defending our country, except to help make it worth defending.”

It was a bold riposte, all the bolder for being made at a time when America's particle physicists were still bathing in the warm afterglow of having given their political masters first the atomic bomb, and then the hydrogen bomb. It gave the game away. But it was the truth.

Science is an odd beast. It has its head in the clouds, while keeping both feet planted firmly on the ground. As a result, it has revolutionised human life both intellectually and practically. That the mental landscape today is almost unrecognisable from that of, say, two centuries ago, is due almost entirely to the work of two groups of thinkers: scientists and economists. Add engineers to that list and you have an explanation for why the physical, commercial and political landscapes have changed just as radically.

For most people, most of the time, it is the second set of changes that is the more significant. The scientifically inspired industrial revolution has brought about the greatest improvement in the human condition since the invention of agriculture in the Neolithic era. It has put bread on the table so reliably that people in the rich world now define poverty not as starvation, but as not having a television in the house.

But, as the founder of one alternative belief system once put it, man does not live by bread alone. Although the benefit is more subtle, the extension of mankind's horizons that has been wrought by science has given those with eyes to see a far clearer understanding of humanity's place in the cosmic scheme of things. It has shown that the universe is vastly bigger and older than was imagined even in the lifetimes of people still alive, and yet that the detailed fabric of reality, and therefore the conditions required for people to have come into existence in the first place, depend on particles that are almost inconceivably small, and on physical laws that are balanced on a knife-edge (see our survey).

Such knowledge butters no parsnips, however; so the crudely practical might ask why the world's taxpayers should pay for its discovery. Yet those who believe in God should surely be sufficiently awed by His creation to want to understand it properly. Those who do not should be even more awed that something as vast, ancient, complex and interesting as the universe could come into existence spontaneously, and result in the evolution of beings who are able to contemplate it and debate its origins. Wilson was right. Those who study such fundamental questions are worth defending. What is mankind without understanding?

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Flirting with anarchy in Argentina

Jan 3rd 2002
From The Economist print edition

Needed: a government and a policy

Reuters

Get article background

IT IS hard to exaggerate the grimness of the plight of Argentina, long South America's richest country. In the days before Christmas, the Argentines' patience with a deepening recession that has lasted three and a half years finally snapped. Rioting, in which 28 people died, brought down first Domingo Cavallo, the discredited economy minister, and then Fernando de la Rua, the incompetent president. But Mr de la Rua's fall has not ended Argentina's turmoil.

Power passed to his opponents, the Peronists, the country's largest political force but a deeply divided one. They have fumbled with it. First, they installed Adolfo Rodriguez Saa as president, but only until an election in March, which the Peronists hoped to use simultaneously as their own party primary. But Mr Rodriguez lasted just a week—long enough only to declare the largest sovereign debt default in history. He was swept away by his own mistakes, and by the anger of Argentina's diminishing middle class at the curbs on bank withdrawals imposed by Mr Cavallo. So this week the country's Congress cancelled the election, instead installing Eduardo Duhalde, a Peronist senator, as the country's third president in less than a fortnight. He will head a coalition government and serve the remaining two years of Mr de la Rua's term.

To an unemployment rate of 18% and an economy on the brink of collapse have thus been added political confusion and social strife. Many Argentines are fed up beyond measure with what they see as a corrupt and self-serving political system. Austerity and corruption make an explosive cocktail. There is a risk that Argentina will slide towards mob rule.

What can stop that awful prospect? The first requirement is a competent and legitimate government. Ideally, that should have emerged from a fresh election. But the country lacks both the time and the stomach for this. Mr Duhalde, whom Mr de la Rua defeated in 1999, is no paragon. But he is at least a pragmatist and, unlike Mr Rodriguez, a political heavyweight. The second requirement is a new economic plan. This must start by recognising the collapse of the country's currency board, which pegged the peso at par to the dollar—and which Messrs Cavallo and de la Rua misguidedly defended long beyond the point at which it had become unsustainable.

What should take its place? None of the options is good, but some are worse than others (see article). An especially bad idea is Mr Rodriguez's plan for a new, non-convertible currency (the argentino). That solves nothing, and is a recipe for inflation. Weighing the bleak alternatives, the least bad policy is to float the peso.

Do not suppose, however, that this will be easy. Most of the country's loans and mortgages are denominated in dollars, whereas the incomes which must service those debts are mainly in pesos. Devaluation, in other words, adds mightily to the debt burden. So the government will have to help households and firms to reschedule their debts. It will have to set up a fund to prevent the collapse of the financial system. It should also seek urgent help from the IMF, so that it can defend a floating currency with replenished reserves. Only once all of these are in place can it even think of lifting exchange and bank controls, opening the way to a rebuilding of confidence and the restoration of growth.

Arguably, the IMF carries some responsibility for Argentina's meltdown. It backed Mr Cavallo with a loan in September without insisting on a change in the exchange-rate regime. That aside, the blame lies at home. Politicians' fiscal profligacy over the years has contributed. So has the peg to the dollar, which

strengthened Argentines' delusion that they could live beyond their means. Retiring that delusion will be hard, which is why devaluation will be unpopular. Still, it is necessary—and it is Mr Duhalde's duty to explain why. The country's politicians of all parties must put their factional quarrels to one side and, for once, rally round.

In this disaster, there are two crumbs of comfort. Argentina's debt default, so long predicted, has not caused storms elsewhere. And, so far, nobody is calling for the armed forces to step in to clean up the politicians' mess. That is progress, even if it is precious little consolation for Argentines as they contemplate the wreckage around them.

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India and Pakistan on the brink

Jan 3rd 2002
From The Economist print edition

General Musharraf is working to avoid war. India must play its part too

Reuters

Get article background

EVEN before September 11th, General Pervez Musharraf, Pakistan's self-appointed president, had signalled that he wanted to take on the religious extremists who have corroded Pakistan's politics for more than 20 years. Then he won international approval by reversing a main strand of recent Pakistani foreign policy, abandoning the Taliban and facing down a wave of protests, rightly predicting that they would have only limited public support. Now the general has to tackle an even more difficult question: what to do about the Islamic groups that use Pakistan as a base for terrorist attacks on Indian-held Kashmir and on India proper. The two problems are linked: the Kashmiri militants have always been both geographically and ideologically close to the terrorist groups in Afghanistan. As the remnants of the Taliban and al-Qaeda limp across the border to Pakistan, there is a danger that the cause of Kashmiri militancy is about to receive a new wave of volunteers.

The most recent outrage, on December 13th, left 14 people dead in a dreadful assault on the Indian Parliament that, had it not been foiled, would have killed many times that number, and would probably have caused war between nuclear-armed India and Pakistan. Indeed, it is still not certain that war will be averted, though the general's action in arresting the leaders of the two main groups, Jaish-e-Muhammad and Lashkar-e-Taiba, has been welcomed by the Indians. The two groups, though not conclusively implicated in the attack, have a history of similar operations, including an assault on the state parliament in Srinagar in October.

The general has rightly understood that the world has changed: that America's vengeance against the Taliban for sheltering al-Qaeda might fairly be invoked to justify Indian retaliation against Pakistan for harbouring Kashmiri terrorists. He has acted to forestall this, though so far he has made only a start. The groups must be not just decapitated, but smashed. Otherwise, Pakistan will simply take over Afghanistan's lost role as the world's chief haven for extremist Islam. Pakistan, after all, is where both the Taliban and al-Qaeda originated.

This is dangerous work, even for a dictator who does not need to worry about elections. The cause of Kashmir is much closer than that of Afghanistan to the hearts of Pakistanis, who have twice gone to war for the state which they believe was ceded to India in 1947 by its maharajah in disregard of the view of its people. The “k” in the very name Pakistan, according to some, stands for Kashmir. If General Musharraf is to have any chance of eliminating the causes of militancy, he needs India to help him, by showing that there is a better way to promote a settlement in Kashmir.

No solution without Kashmiri involvement

India has so far been reluctant to do so. For fear of internationalising a conflict it regards as its own affair, India has always rejected any form of outside mediation in Kashmir. It has refused to hold talks with the main Kashmiri political groups, on the ground that they want Pakistan to be seated at the negotiating table with them. Last year a promising attempt to start negotiations came to naught, mainly because India refused to let some of those Kashmiris visit Pakistan for talks.

Yet even now there is the chance of progress. The last time the leaders of India and Pakistan met, in Agra in July, the talks at one point came quite close to yielding a useful outcome, which would have

brought regular ministerial meetings with Kashmir at the top of the agenda, and even a role in the discussions for the Kashmiris themselves. The prospect was dashed mainly because Pakistan would not offer India a promise to work on the problem of cross-border terrorism. Now General Musharraf is doing precisely that. India should reciprocate by agreeing to more talks—with the Kashmiris involved too.

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Letters

Jan 3rd 2002
From The Economist print edition

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The euro arrives

SIR – Your survey of European business and the euro (December 1st) aptly illustrates that the euro is primarily about politics and not economics. Enthusiasts claim that the euro will provide many benefits to businesses and consumers, and frequently cite reduced transaction costs as an example. But even after notes and coins are introduced there will be no automatic reduction in such costs. For example, travellers from both Britain and Germany who use their cash cards in a bank machine in France will face the same high charges. The same is true of travellers using credit cards or cheques—whether they come from inside the euro zone or not.

Price controls on bank charges, to be introduced by the EU's new regulation on cross-border payments, are a last-ditch attempt to try to deliver some of the euro's promised benefits. The most rudimentary study of economics tends to show, however, that price controls seldom work well in practice. If any benefits to European businesses and consumers do materialise (and they seem invisible so far) they will be incidental rather than by design.

Theresa Villiers MEP
Conservative finance spokesman
Brussels

SIR – You say that “economic history offers no precedent for the conversion of the individual European currencies to the euro, nor for the dual-currency system that will briefly operate after the switch.” The switch from the cruzeiro to the *real* in Brazil in 1994 was similar to the euro experience. It may have been less elaborate as only one currency was replaced but it involved a territory much larger than Europe with places far more distant and hard to reach.

Carlos Junqueira
Rio de Janeiro

SIR – After much earnest discussion of likely European price convergence I am entertained to see an announcement at the end of the survey stating, “Reprints of this survey are available at a price of £2 in Britain and £2.50 elsewhere.” Is this one last arbitrage opportunity?

David Jackson
Windsor, Berkshire

Perverse incentives

SIR – You blame auditors, accounting rules, investment analysts, credit-rating agencies and regulators for the Enron debacle (“The amazing disintegrating firm”, December 8th). You miss the most important cause: executive incentives. In fact, I err in calling it a debacle; Enron was a huge success for its top managers. Kenneth Lay, chairman and CEO, made $123m in 2000 from exercising share options. As long as top management is given extraordinary incentives to mismanage it will find ways to fool or subvert auditors, accounting rules, investment analysts and the rest.

The real lesson is that we need to bury the myth that executive incentives align managers' interests with those of shareholders. Incentives always reward exceptional performance or exceptional deception; in

most cases deception is the easier route. I fear, however, that this lesson will go unheeded as it is not in the interests of managers or compensation consultants to promote it.

David Creelman
Aurora, Canada

Judging Arafat

SIR – The Israeli government decided to cease contact with Yasser Arafat, head of the Palestinian Authority, in December ("Adieu, Arafat?", December 8th). It was natural for the Israeli government to judge that Mr Arafat had failed to prevent a year of Palestinian violence against Israel.

However, I cannot help but recall an historic decision made in 1938 by Fumimaro Konoe, Japan's prime minister, in the early stage of what the Japanese military called the China incident. He declared that his government would no longer negotiate with China's Kuomintang government led by Chiang Kai-shek. The declaration came one month after the Japanese army occupied Nanking, then the capital of China. The decision proved a fatal mistake on the part of Japan. Shutting the door on any attempt to talk peace dragged Japan into a protracted war against China. In the same way, Israel's decision may lead the Middle East into an endless bloody conflict between the Arabs and Israelis.

Takeo Nakao
Kawanishi, Japan

SIR – All this talk about Mr Arafat's choice is essentially nonsense. The central choice was, is, and will continue to be with Israel and it is tragically simple. Either it ends over 30 years of occupation and deals honestly with the refugee problem or it continues to occupy Palestinian lands and lives with the consequences. In general, I find your writing on the situation like reading a sober analysis of rape which never condemns the act. You often treat the occupation as distant background material.

Erkki Adourian
Paris

SIR – Your views on Palestine seem to come close to despair regarding Mr Arafat's performance. But nobody in this country talks about the dreadfulness of living under foreign occupation. Can you or indeed anyone visualise some kind of a Quisling being able to satisfy Israel's desires for a "peaceful acceptance" of the occupation?

Paul Mathieu
Manassas, Virginia

SIR – It is time the Palestinians asked themselves whether they really wish to have an independent state. So far they have turned down all the opportunities they had to gain sovereignty. The establishment of a Palestinian state now might point the way out of the present impasse. It is generally agreed that a peace agreement must precede the establishment of a Palestinian state. In my view the order should be reversed: a Palestinian state, recognised by the outside world, including Israel, should be established forthwith. Many thorny issues will remain unsettled. Until they are, both sides must undertake to refrain from shooting and from making unilateral changes to the status quo. This is not a formula for settling the bitter outstanding disputes. What is suggested here is a change in the framework within which they face each other. This should help to transform the conflict between Israel and the Palestinians from a tribal war over the land they cohabit into a conflict between sovereign states.

Seev Hirsch
Tel Aviv

Innocent Rose

SIR – Lexington (December 15th) says that Gerald Ford "pardoned one of the 20th century's most notorious traitors, Tokyo Rose." Not so. He pardoned Iva Toguri d'Aquino, a disc jockey falsely convicted of being Tokyo Rose, after a vicious campaign by Walter Winchell. My book proving her innocence ("The Hunt for 'Tokyo Rose'", Madison Books, 1988) was prefaced by Ramsey Clark, a former attorney-general of the United States, whose father, Tom Clark, was the attorney-general who prosecuted Mrs d'Aquino on faulty advice.

Russell Warren Howe
Washington, DC

SIR – Lexington correctly says that Americans “have not executed a single person for the crime this century.” Small comfort then that the century has scarcely begun.

Christopher Ballantyne
Arlington, Virginia

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The euro

Ring in the new

Jan 3rd 2002 | FRANKFURT
From The Economist print edition

AP

As euro notes and coins become legal tender in 12 European countries, what are the costs and benefits of this currency union?

Get article background

GOODBYE, Antoine de Saint-Exupéry, Vasco da Gama and René Magritte. Over the next few weeks the French, Portuguese and Belgian banknotes they adorn will disappear, along with nine other European currencies. Their replacements are figments of the imagination: stylised bridges and doorways, symbols of European unity on the continent's new currency, the euro. The money, though, is real enough, and it is also the biggest step yet towards European political and economic integration. On January 1st, the euro area's 300m citizens could at last withdraw euro notes and coins and start spending their new money.

The switch should be rapid. Bank machines across the euro area are supposed to dispense only euros; in theory, retailers are supposed from now on to give change only in the single currency. So only euros will be going into circulation, while national currencies will be taken out. Within two months, all the national currencies will cease to be legal tender (see table).

Naturally there will be glitches. Although most bank machines were dispensing euros on January 1st, it will take a few days before all have been converted. Some French bank and post-office workers went on strike on January 2nd, demanding more money and better job security. Many small shopkeepers had not stocked up with the new money before the turn of the year, perhaps not wanting to hold a lot of cash, and so were unable to deal with euros straight away. On New Year's Day the Lisbon branch of Portugal's central bank was crammed with traders heaving in plastic bags full of escudo coins, and with old people who were under the mistaken belief that they had to change all of their money in one day.

Inevitably, some queues have been longer than usual. A nine-kilometre tailback formed at a motorway toll station near Rome on January 1st. In Athens, Grigoris Tsigaridas, who runs a kiosk, said: “We're trying to give everyone change in euros even if they pay in drachmas, but inevitably there are mistakes and arguments. The people in kiosks are bound to get blamed a lot. We're telling each other we're part of a learning experience.”

Countdown

	National currency units per euro	End of legal tender for national currency, 2002
Austria	13.7603	Feb 28th
Belgium	40.3399	Feb 28th
Finland	5.94573	Feb 28th
France	6.55957	Feb 17th
Germany	1.95583	Dec 31st 2001*
Greece	340.750	Feb 28th
Ireland	0.787564	Feb 9th
Italy	1936.27	Feb 28th
Luxembourg	40.3399	Feb 28th
Netherlands	2.20371	Jan 28th
Portugal	200.482	Feb 28th
Spain	166.386	Feb 28th

Source: ECB

*Retailers will generally accept D-marks until end of Feb 2002

For some Europeans, the changeover has been a breeze. Jonas, an elephant at Lisbon zoo, used to ring a bell when escudo coins were dropped into a bucket, refusing to perform if they were too small. His trainer reports that he now turns up his trunk at anything less than a ten-cent coin. Some humans, though, may find the adjustment harder.

Italians, for example, who remain big users of cash, will have to use more coins and fewer notes now that the 1,000-lire note, worth a mere 52 cents in the new money, is going. Last weekend, they drew huge amounts of lire from bank machines, fearful that they would be left short of cash in the new year. And if the French want to convert new prices into francs, they must multiply by the awkward number of just over six and a half.

Gougers and ready reckoners

Many Europeans have their misgivings about the new money, despite (or perhaps because of) the breathless enthusiasm of politicians, central bankers and big business for the project. Eastern Germans, in particular, have been disgruntled about giving up the D-mark they coveted so long after only a decade.

There are also plenty of folk who suspect that retailers will take advantage of their unfamiliarity with the euro to sneak prices up. Some are indeed doing so; but other people are rounding prices down, including Spanish utilities and Germany's biggest supermarket chains, which took out full-page newspaper advertisements on January 2nd to let the public know. Some shops are even promising discounts to customers who save them time by paying with euros or plastic. *Le Figaro*, a French newspaper, has cut its price from FFr7 to *euro*1 (FFr6.56).

EPA

A little private enterprise has helped to ease the adjustment. *¡Hola!*, a Spanish magazine, gave away peseta-to-euro reckoners, and Greek retailers bought hand-held converters from African and Albanian street traders for *euro*3.20 a throw.

All in all, in the first couple of days, the lack of friction over the issuance of new notes and coins looked remarkable, given the scale of the logistical operation behind it all. By December 31st *euro*132 billion of notes, and 37.5 billion coins, had been distributed to banks, with some handed on to retailers and, in the case of coins, to the public. National currencies have to be collected, and shredded or melted down. Despite all the extra cash being driven around Europe, armed robberies in the past few months have been less frequent than usual.

The fact is that, despite this week's fireworks, the euro is already three years old. In economic terms, the introduction of notes and coins is like the formal opening of a huge new building that has been in use for some time. A lot of the changes associated with the introduction of a new currency were carried out long ago.

At the start of 1999, the exchange rates of 11 national currencies were irrevocably fixed (Greece, the 12th member, joined the club only in January 2001). Since then, these currencies have technically been sub-units of the euro. For the past three years a new institution, the European Central Bank (ECB), has been setting a single interest rate for the whole euro area.

Three years of practice

The euro has thus become a fact of economic life, even if most Europeans could ignore it until this week. Big companies have long been publishing their accounts and trading in euros, and this has pushed many smaller ones into using it too. Share prices have been quoted in euros for the past three years. Governments have issued a quarterly average of well over *euro*100 billion of euro-denominated debt. Corporate-bond issues in euros, less than *euro*5 billion in the final quarter of 1998, reached *euro*64 billion in the second quarter of last year, as European telecoms companies scrambled to pay for third-generation mobile-phone licences.

The new currency has not, however, turned Europe into a dynamic economic powerhouse. Nor can it, if

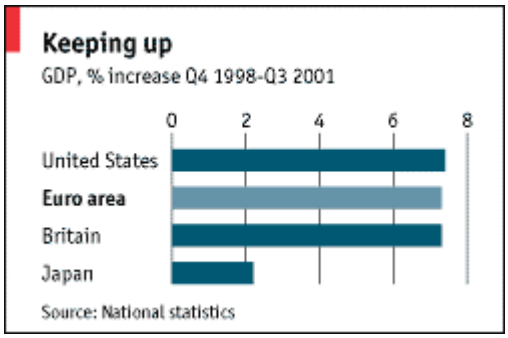
governments continue to shy away from making the necessary microeconomic reforms. The European Union's single market is still incomplete. Protected industries are yet to be opened fully to competition, and Europe's product and labour markets are still too highly regulated. The hope that the euro would rival the dollar as a reserve currency is also a long way from being fulfilled. Although the euro has taken the D-mark's place as the second-commonest currency in foreign-exchange reserves, it has only one-fifth of the dollar's share.

Critics point out that it remains feeble in the foreign-exchange markets, now buying around 90 American cents, compared with $1.17 when it was launched. They also complain that the ECB was too slow to cut interest rates in 2001, thus helping to push the euro area near, and maybe into, recession. In addition, the bank's presentation of its policy has often made it into a laughing stock. More than once, the ECB's president, Wim Duisenberg, has made daft remarks to journalists that have sent the currency tumbling.

The euro's weakness is not in dispute: Mr Duisenberg has often lamented its undervaluation. Moreover, the ECB's explanations of its interest-rate decisions (in particular, a quarter-point cut last May) have occasionally beggared belief. But this scarcely amounts to catastrophe. The euro's fall against the dollar was no bad thing, since it supported exports and growth in the euro area. In any case, the ECB's job is to guard not the external value of the currency, but its internal value—ie, to keep inflation in check. That it has done successfully, if too fiercely for some. Mr Duisenberg, meanwhile, has looked surer-footed in the past few months. He seems to have no plans to comply with earlier French hopes that he would depart in mid-year, to be replaced by a Frenchman.

In the end, carping about the euro's exchange rate or about Mr Duisenberg's incompetence is irrelevant. Neither tells you whether it makes economic sense to fuse 12 disparate economies into a single-currency area. The euro's fall had nothing to do with the currency's creation, and everything to do with markets' faith in America's growth “miracle”. Misplaced faith, as it turned out: since the euro's launch, GDP in the single-currency area has grown as fast as in Britain, faster than in Japan and only slightly slower than in America (see chart).

Full marks for the euro, then? Hold on. The chief cost of the single currency comes from applying the same interest rate in every country, regardless of national conditions. The strains that this can impose were clear in the run-up to the euro's creation. Irish interest rates were slashed in 1998, for instance, even though the economy was racing, to bring them into line with those of its euro-area partners. These stresses continue. Ireland is still growing healthily, even if not at the breakneck speed of most recent years, and it could surely bear higher rates than the current 3.25%. The shrinking German economy, on the other hand, could do with a rate cut.



This is awkward, but not unbearable. Irish inflation, which peaked at 7% in November 2000, has since subsided to 3.8%—on the high side, but hardly rampant. German interest rates might not have been all that much lower, or cut much sooner, even if the Bundesbank were still in sole charge, given that domestic German inflation touched 3.5% last spring.

Yet as a test of the single currency, the tensions of the past three years have been mild. Much more awkward times lie ahead, especially if Europe's incipient recession turns nastier and America's recovery is delayed. The European Commission's president, Romano Prodi, said recently that sooner or later “there will be a crisis”. Whatever could he mean?

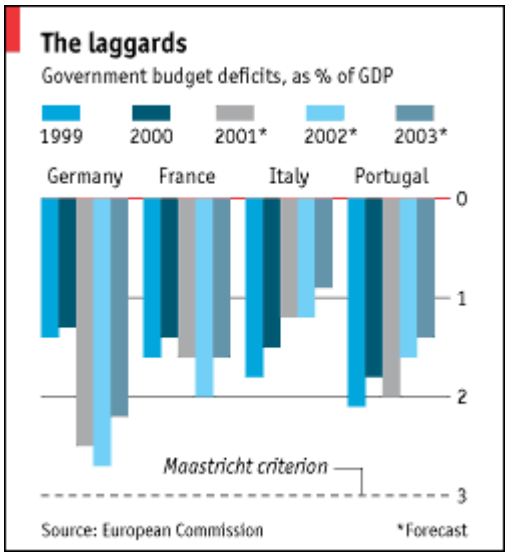
The perils of stability

The first probable source of trouble is Europe's “stability and growth pact”, a fiscal accompaniment to the single monetary policy. Under this pact, governments have to present plans to the European Commission to bring their budgets into balance, and then to keep them there. Much more draconian, the stability pact lays down that any country whose budget deficit exceeds 3% of GDP must take immediate action to bring it back below that ceiling or face a fine that could be as large as 0.5% of GDP. There is an escape clause in cases of severe recession, but it is far too tightly drawn to be of much practical use: GDP must, for example, shrink by as much as 2% in one year if a country is automatically to avoid any risk of fines.

The overseer of the stability-pact provisions, the European Commission, says that most euro member

governments are on the straight-and-narrow, even after the effects of the economic slowdown on taxes and government spending have been taken into account. However, it has pinpointed four laggards—France, Germany, Italy and Portugal—that are all supposed to come back into line by 2004 (see chart). In these countries, the commission says, the so-called “automatic stabilisers”, which increase deficits during any economic slowdown, should be allowed to operate only partially.

Why has Europe imposed such a barmy straitjacket on itself? The idea behind the pact is to stop governments undoing the anti-inflationary work of the ECB by loosening fiscal policy, and to stop profligate governments from pushing up borrowing costs for all, in a form of free-riding. But the economic logic of tying euro members' fiscal hands in this way is flawed. It is questionable whether borrowing by any one country can significantly push up the costs for all others. What is more certain is that obliging those that still have work to do on their fiscal positions to keep tightening their budgets, even when their economies are in recession, is the sort of hairshirt philosophy that has undone many countries' economies in the past, the most recent example being Argentina.



The biggest problem is Germany, whose budget deficit is already dangerously high. A balanced budget by 2004, as required by the European Commission, looks far out of reach. Worse, the commission in its autumn forecast thinks that Germany's budget deficit will be 2.7% of GDP in 2002, which is much too close to the 3% ceiling for comfort. Some forecasters think the margin for error is narrower still.

Unless the German economy shows signs of renewed life soon, the euro area is heading for an awkward choice. On the one hand, everyone from the commission to the ECB to the German finance minister has vowed to observe the letter and spirit of the stability pact. A change of mind, or even a mere softening of the pact's terms, could weaken markets' belief in governments' commitment to fiscal rectitude. The loss of face would be all the greater because the pact was essentially a German idea. On the other hand, sticking rigidly to the pact risks prolonging a recession in the euro area's biggest economy.

The political implications could be huge at the European level as well. To put it mildly, it would set off a political crisis if Germany breaches the 3% limit and proceedings are set in motion to fine it for its behaviour. And the potential fines, which fortunately need the approval of a majority of the Council of Ministers before they can be imposed, are gigantic: in the case of Germany, as much as *euro*10 billion.

Strains to the east

The second possible source of trouble is one that dogs any currency union: the risk of an asymmetric shock that afflicts one part of the region much more than any other. Russia's economic collapse in the late 1980s, for example, hit Finland especially hard. German unification soon afterwards administered a shock to the West German economy. If such things happen to a currency union, the policy response is hard, because there is no scope for any independent monetary or exchange-rate management. Moreover, Europe lacks the labour mobility and large central budget that makes the United States, say, able to cope with asymmetric shocks.

AP

It may be that the risk of such shocks inside today's euro zone is not great. But the eventual enlargement of the euro area, especially as the Union expands eastwards, adds an extra dimension. Unlike Britain and Denmark, which have a formal “opt-out” from the single currency, and Sweden, which also did not join, the new entrants to the EU will be obliged to join the single currency once they have satisfied the Maastricht criteria on exchange-rate stability, inflation, and government deficits and public debts. Clearly, the potential cost of a single interest rate rises with the number of countries, because of greater risk of asymmetric shocks.

Until now, the euro area has avoided any big asymmetric shocks. The main economic events of the past three years—changes in oil and food prices and a global economic slowdown—have had broadly similar effects

on all 12 countries. Throw in Eastern Europe, however, and the probability of events with different regional effects is sure to increase. A new economic crisis in Russia, say, would have far greater effects on Latvia, say, than on Ireland.

On top of this, living standards in the aspirant countries are lower, sometimes much lower, than anywhere in the current EU. Giving up the freedom to adjust interest rates, and accepting a monetary policy that may be either too tight or too slack could hobble their progress towards western living standards. And that raises the risk of a backlash against European integration in these countries.

Nothing smaller?

In search of true flexibility

Neither of these sources of trouble, however, looks likely to break the currency union itself. Rather, they make it even more important that changes are made to introduce more flexibility into Europe's economies. Besides doing away with exchange-rate risk, the creation of a single currency ought in theory to increase competition, by making prices easier to compare. Big companies have already gained from this. Now that notes and coins have arrived and national currencies are about to die, ordinary citizens ought to see some benefits, too: a loaf of bread or litre of milk should cost much the same on both sides of a border.

Where international price differences remain, the reasons for them should at least become clearer. Sometimes there will be an economic justification, such as transport costs, or differences in the cost of land. Sometimes, there will not. The price of cars, for example, will continue to vary, thanks mainly to the block exemption for exclusive dealerships that has been permitted by the European Commission (but which may soon be scrapped). So will the prices of energy and postal services, thanks to national monopolies and the foot-dragging of politicians over opening up their domestic markets to competition.

The euro can only expose regulatory and other obstacles to competition. It cannot sweep them away. It would be comforting to think that the continent's politicians will do their damnedest to wring all the available economic benefits out of the clarity that the single currency will create. There is a danger, though, that they will not. The cosseting of monopolies, France's 35-hour week, and Germany's sinking of a pan-European takeover code last year scarcely smack of commitment to the thorough structural reforms that Europe needs.

There are risks ahead for Europe's single currency. But there are also benefits to be had. It is high time that Europe's governments acted to maximise those benefits—and to help the euro work more efficiently for the good of the Union.

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New York's mayor

Long-running show closes on Broadway; new one previews

Jan 3rd 2002 | NEW YORK
From The Economist print edition

As New York's inexperienced new mayor takes office, what lessons should he draw from his remarkable predecessor?

Reuters

Get article background

STANDING in Times Square before a half-mile-long crowd madly waving red and blue balloons on a freezing New Year's Eve, Rudy Giuliani hugged his successor, Michael Bloomberg, and whispered, “Take care of these people.” The media tycoon, who spent $70m of his own money to get the job, duly began his mayoralty by stressing New Yorkers' need to work together. But by lunchtime the next day he had announced a 20% cut in his own staff and suggested that the rest of city government do the same.

Times Square is a good introduction to Mr Giuliani's bequest to Mr Bloomberg. Eight years ago, when Mr Giuliani came to power, the square was seedy, violent and dilapidated. By last summer, Mr Giuliani's policies had transformed it. Illegal scam-artists had been replaced by sophisticated legal ones (investment bankers, fashion writers), strip-joints by theme stores. A certain raffish charm had gone and a few liberties had been eroded, including the right to perform naked, but midtown was far safer and more prosperous.

Then came September 11th, the war against terrorism and an economic downturn. Broadway shows have closed, the hotels still seem empty. To enter Times Square on New Year's Eve, you had to pass through a metal detector. Mailboxes were removed, man-hole covers sealed. Officers with Geiger counters and sniffer dogs patrolled. Yet hard times have also generated a civic spirit unthinkable five months ago. There was a lot of hugging at the handover, even of policemen.

The outgoing mayor has been justly feted for the heroic and sensitive way he held the city together. But the city's future may rest more on his first seven years. His supporters argue that it was then that Mr Giuliani rescued New York, enabling him to leave behind a city with 66% fewer murders, 73% fewer grand larcenies and 50% fewer welfare claimants than in 1993.

Critics say these figures do not tell the whole story. The most extreme—for example, Wayne Barrett's “Rudy! An Investigative Biography of Rudolph Giuliani” (Basic, 2000)—claim he ran “a government of, for, and by white people.” Milder-mannered people claim the mayor was the beneficiary of an unprecedented economic boom, and dispute how much the decline in crime was his work.

Under his predecessor, David Dinkins, the city's first black mayor, New York was often described as “ungovernable”. City Hall was a semi-socialist cabal, famous for high taxes and appalling services, notably grotty schools and crime-ridden streets. Meanwhile, Mr Dinkins's tendency to dither stoked up the city's racial tensions.

Insiders say that Mr Giuliani's first discovery was that New York was less ungovernable than ungoverned. He introduced simpler budget-setting processes, and took a much tougher line with interest groups, facing down the main municipal unions and having little truck with special pleading by minorities. He pushed through welfare reforms, cut taxes and fought hard to bring business back to the city.

But his main achievement was public safety. Why crime fell so fast is much debated. Certainly some trends, such as reduced use of crack cocaine, fewer teenagers and a booming economy, helped Mr Giuliani. It is also true that Mr Dinkins had already introduced tough policing strategies on the subway, and raised taxes sharply to fund a large increase in the number of policemen in the New York Police Department.

Yet under Mr Dinkins, the NYPD still felt powerless to do its job. Under William Bratton, Mr Giuliani's first police commissioner, the NYPD pioneered a “broken windows” strategy, meaning more arrests for small crimes. It focused on preventing crime rather than solving it, and on holding officers accountable for each precinct's performance.

A recent study* by the pro-Giuliani Manhattan Institute claims that the number of arrests for minor misdemeanours, the best proxy for broken-windows policing, is closely correlated to levels of serious crime. During 1989-1998 (ie, including the Dinkins administration), every 28 additional misdemeanour arrests reduced the number of expected violent crimes by one. The study, which also strips out the impact of factors such as unemployment, the number of young males and cocaine abuse, claims that the correlation held in almost all New York's 76 police precincts, and not just the touristy bits of Manhattan.

A lot of the credit for New York's safer streets should go to Mr Bratton, whom Mr Giuliani jealously dumped. But Mr Bratton could do his work only because Mr Giuliani backed him. Worries about police brutality have grown, but no New Yorker would willingly go back to 1993. Safer streets are Mr Giuliani's main bequest to Mr Bloomberg.

Where he failed

By contrast, the mayor did little to solve New York's other great embarrassment: its schools. Eight years of rowing with teachers' unions and falling out with his various school chancellors has had little impact. True, “social promotion” (letting children go up a year even if they have not learned anything) is being phased out, and teachers are slightly more accountable for performance. But attempts to bring in any sort of choice for poor parents have failed.

One explanation is that, unlike the NYPD, the schools system is not under the control of the mayor. But the failure also ties into the idea that much of Mr Giuliani's second term (in which he promised to sort out the schools) was wasted. The purpose of the first term drifted into soap opera, gimmicks and alienation.

Mr Giuliani seemed distracted by a contest for a Senate seat. He had to abandon that to fight prostate cancer, but he might well have lost anyway. His acrimonious divorce filled the tabloids, while his policies veered between the vindictive (trying to withdraw funding from the Brooklyn Museum of Art because of its allegedly blasphemous exhibits) and the dictatorial (clamping down on jay-walkers). He also became lazy with finances. The number of people working for the municipality, which fell during his first term, is now higher than when he took office, and even before the cost of September 11th the city would have had a huge budget deficit.

Although they may not care to be reminded of it now, last summer many New Yorkers found Mr Giuliani unnecessarily divisive—in much the same way that Britons once tired of the politician he most resembles, Margaret Thatcher, but with an added racial dimension. Back in 1993, Mr Dinkins, whose campaign had focussed overwhelmingly on race, won 95% of the black vote. Mr Giuliani never really broke through to minorities in general, and blacks in particular.

His supporters point out that minorities were the main beneficiaries of his policing reforms; that they would also have gained most from his attempts to change education; and, on a personal level, he seems to be rude to people of all races pretty much equally. But his insensitivity to minority issues began to grate, particularly over police brutality. There was no statistical evidence to back his critics' claims that the NYPD was “out of control”, but it was also crass of the mayor to show no remorse when defending four NYPD cops in 1999 who had shot Amadou Diallo, an innocent black man, 41 times.

By September 10th Mr Giuliani's best work seemed behind him. The period since then has transformed his legacy in two ways. First, it has reminded everybody of his strengths. (Fred Siegel, a historian at the Cooper Union, compares him to the ruthless prince whose “corrupt wisdom” Machiavelli so yearned for in Florence.) And second, Mr Giuliani has discovered a talent for uniting people.

For Mr Bloomberg, this provides some grounds for hope and for caution. New Yorkers, who once seemed

bent on electing the candidate who least resembled Mr Giuliani, now once again realise the need for change. The chance is there to bring the schools under the mayor's direct control (as in Chicago), and to tackle the city's finances. On the other hand, the current public spirit may not last.

It would be nice to argue that Mr Bloomberg is perfectly suited for this balancing act. Like Mr Giuliani eight years ago, he is a Republican, with few political debts to the Democrat apparatchiks in City Hall. However, unlike Mr Giuliani, who had years in government service getting to know his enemy, Mr Bloomberg's career has been wholly in the private sector. And while nobody doubted what Mr Giuliani believed in, the credo of Mr Bloomberg—a Democrat until recently—is murky.

He has styled himself as a moderniser and a pragmatist. Rejecting an office, Mr Bloomberg has reconfigured City Hall into a giant open trading floor, with himself in the centre. But how appropriate will the new mayor's business success be to his new job? Mr Bloomberg's eponymous company epitomises modern private-sector New York: in the aftermath of the terrorist attacks, Bloomberg machines were one of the few systems that continued to function. Now he is dealing with old infrastructure, voters rather than customers, and workers used to promotion through seniority rather than ability.

There is no harm in the new mayor being more conciliatory than Mr Giuliani, who often created enemies needlessly. What matters is whether he has the same steel underneath. Privately, Mr Giuliani's people worry whether the new mayor is tough enough, and think too many of his team come from the Dinkins era. On the other hand, his decisions to cut his own staff by 20%, to rule out tax rises and to shelve grandiose projects, including a new baseball stadium, augur well. It is not often one wishes a billionaire all the luck in the world; but Mr Bloomberg needs it.

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* “Do Police Matter?”, by George Kelling and William Sousa, Manhattan Institute, December 2001

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The death penalty

Always an eye for an eye?

Jan 3rd 2002 | CHICAGO
From The Economist print edition

The number of executions fell sharply in 2001

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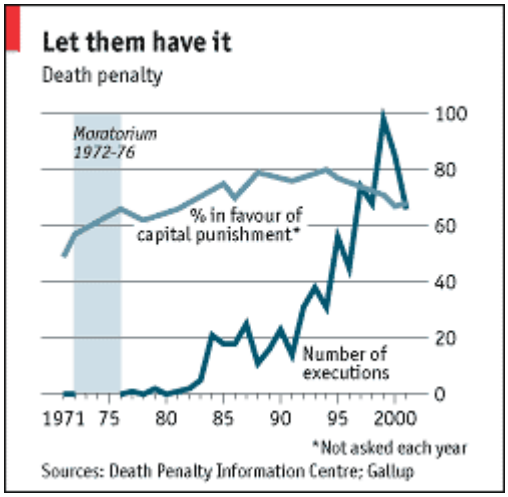

DESPITE the circus surrounding the injection of Timothy McVeigh, the first federal excution since 1963, last year was a slow one on Death Row. Federal and state governments executed 66 inmates between them, down from 85 in 2000 and 98 in 1999. It was the first time the number of executions has dropped for two consecutive years since the death penalty was reinstated in 1976. The number of prisoners awaiting execution also appears to have finally levelled off. Some 3,700 convicts languished on death row as of October 1st, slightly fewer than at the beginning of the year. According to the most recent statistics from the Justice Department, the number of death sentences passed by American courts in 2000 was the lowest in 20 years.

Make no mistake: most Americans are still keen on taking an eye for an eye. Two-thirds approve of capital punishment. But that figure has fallen steadily from its peak of 80% in the mid-1990s, as the focus of debate has shifted from the question of whether the death penalty is right in theory to whether it is fair in practice.

Nearly 100 innocent prisoners have been exonerated and released from death row since 1973. Among the five set free in 2001 was Charles Fain, who had spent 18 years on death row in Idaho before DNA evidence proved that he was not guilty of kidnapping, rape and murder. As Sandra Day O'Connor, a Supreme Court Justice, admitted in July, the statistics imply that “the system may well be allowing some innocent defendants to be executed.”

Among the guilty, those who are white and relatively rich are less likely to find themselves on death row. A study commissioned by the Nebraska legislature and published last year found that a death sentence is four times higher when the victim is richer than the perpetrator. Studies in North Carolina and New Jersey revealed that defendants whose victims are white have a far greater chance of getting the death penalty than those whose victims are non-white. Another Supreme Court Justice, Ruth Bader Ginsburg, said that she had not heard a single appeal in which a defendant who had been sentenced to death was represented by a decent lawyer.

Seventeen states passed laws last year to provide convicted criminals with improved access to DNA testing. Five states banned the execution of the mentally retarded. Several polls have found that a majority of Americans would support a temporary halt to the death penalty, in order to study the way it is managed. Illinois implemented such a hiatus in 2000; a panel appointed to study the process by Governor George Ryan is expected to deliver its report this year. Nearly 20 states contemplated (though none initiated) similar moratoria last year.

Will the war against terrorism make Americans more vengeful? Richard Dieter, director of the Death Penalty Information Centre, doubts it: Americans, he says, will separate the question of terror-related prosecutions from that of the justness of the death penalty. A recent Gallup poll showed that support for the death penalty was only three points higher in October than it had been in May—hardly proof of Mr Dieter's assessment, but reassuring all the same. Even supporters of the death penalty seem to believe that it is a punishment best used on those who are guilty.

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Larry Summers v Cornel West

Seeing crimson

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The folly of making famous professors write learned books

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AP

Who said anything about work? This is Harvard

THESE days university presidents are a hopelessly anodyne bunch. They mouth politically-correct platitudes, make nice comments to potential benefactors and, in general, do their utmost to avoid saying anything that might be misconstrued as either interesting or original.

How refreshing then to deal with Larry Summers. Bill Clinton's erstwhile treasury secretary has always found it hard to suffer nonsense gladly. In Washington, DC, he was muzzled, at least in public. But since being named president of Harvard University six months ago he has reverted to type.

First, Mr Summers called for something to be done about grade inflation. This year more than half of all grades given at Harvard were As. Yet before Mr Summers appeared, most of the 2,000 strong faculty apparently regarded this as a testimony to their brilliant teaching, rather than anything to do with collapsing standards.

Then he praised patriotism, telling a meeting at the Kennedy School that “patriotism” is a word “used too infrequently in communities such as this”, and lamented that the Vietnam War had led to a disaffection “toward people who wear uniforms”. This too seems to have gone down badly.

Now he is at war with the university's Afro-American studies department. According to the *Boston Globe*, last October Mr Summers rebuked Cornel West, who holds one of Harvard's coveted university professorships. Mr West's alleged sins included recording a rap CD, leading a political committee for Al Sharpton's possible presidential campaign, writing books more likely to be reviewed in *The New York Times* than in academic journals and allowing grade inflation.

Since then the incident has spiralled into a full-blown academic tempest. The insulted Mr West is considering a rival offer from Princeton, his former employer. Henry Louis Gates, the department head, and Kwame Anthony Appiah, a philosopher, are thinking of going with him. Mr West has also announced that he intends to take a leave of absence.

It will get worse. Jesse Jackson, that well-known crusader for academic standards, has arranged a meeting with Mr Summers. “The tension at Harvard is having an impact across the country,” says Mr Jackson, whose last venture into politics was to try to broker a deal with the Taliban. Mr Sharpton also wants to meet Mr Summers. He is considering filing a lawsuit against Harvard as “an aggrieved party”.

If every professor who backed a lunatic politician were to be sacked, half the interesting minds in academia would be lost. Nobody denies that Mr West is talented. But is his work any good? He is the author of more than a dozen books, some of them serious contributions to his field. But lately he seems closer to becoming a performance artist—and a poor one at that.

His rap album (sample lyric: “No other people in the modern world have had such unprecedented levels of unregulated violence against them”) indicates that the medium is best left to the likes of Snoop Doggy Dogg rather than Harvard professors. His website is shot through with embarrassing boasts and grammatical errors. The section devoted to the rap album begins by stating that “In all modesty, this

project constitutes a watershed moment in musical history" (what on earth would the immodest version be?). It describes Mr West as "one of the most preeminent minds of our time" and refers to somebody called "Nietzche".

So Mr Summers clearly has a point. But that does not mean he will win. Minority groups are very powerful in academia, and Mr Gates has transformed Harvard's Afro-American studies department into one of the most successful in the country. In 1991, when he took over, it was a backwater consisting of one white professor and a handful of students. It now boasts some of the most distinguished black academics in the country, notably William Julius Wilson. Mr West's introductory course on Afro-American studies attracted more than 600 students this semester.

This week Mr Summers apologetically announced how proud he was of all the members of the department, and pledged to create an "attractive environment" for them (usually campus-speak for "more money for less work"). But before he records his next "watershed moment", the talented Mr West might ponder whether Mr Summers had a point. Meanwhile, Tom Wolfe may just have found the subject of his next novel.

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Lexington

Back to stalemate

Jan 3rd 2002
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The “big change” in party politics since September 11th : no change

EVERYONE agrees: along with air travel and the availability of tickets on Broadway, American politics has been “transformed” by the attacks of last September. The only detail that remains to be discussed is how exactly this transformation will affect the mid-term elections in November. Some argue that Americans' rally-round-the-president spirit and their new toughness over national security will help Republicans. Others, that the extraordinary post-September surge in public trust in government will benefit Democrats. Lexington disagrees with both: 2002, as befits a palindrome year, will run backwards as smoothly as it runs forwards, returning American politics to the stasis that produced the tied presidential race of 2000.

Such an even outcome does represent a change of sorts. Back on September 10th, most people were predicting a bloodbath for the Republicans this coming November. Parties that hold the presidency rarely do well in mid-term elections, even at the best of times. The president's party has lost seats in the House of Representatives in 32 of the past 34 mid-term elections. And these have hardly been the best of times. By last summer, the economy was in recession. The budget surplus was evaporating. President Bush's early legislative successes did not seem to be doing him much good. The partisan tax cuts pleased conservatives but left others confused about whether they would help or harm the economy. His bipartisan education proposals got drowned out by the political static—hardly desirable for the president's “number one” priority. And, thanks to the defection of Jim Jeffords, he had already lost control of the Senate.

The attacks of September 11th have altered the balance. Except for a handful of dyed-in-the-wool Democrats and a man at the *New Yorker*, no one questions the president's legitimacy any longer. Far fewer people now think of Mr Bush as a man too small to be president. The blame for the slowing economy has shifted away from the White House. The confidence of Americans has surged—confidence both in government and in themselves. At a time when almost all economic indicators have been telling them they were worse off, there has been a big rise in the number of people telling pollsters that they think that the country is “on the right track”. And, for the moment, national security issues are to the fore—which favours Republicans.

But the reordering of public priorities has been more modest than expected. You might have thought the war on terrorism would have monopolised Americans' public concerns. It has not. Americans say they consider the state of the economy to be of roughly equal importance. Unless there is another terrorist assault on America or unless the economy rebounds dramatically (the first, unfortunately, more likely than the second), then the relative importance of the economy as a matter of public debate is likely to grow. That will help Democrats but not, probably, by so much as to transform the 2002 election

campaign.

In the past, mid-term victories for the opposition have usually depended at least partly on the ability of the “out” party to savage the president, even though he is not on the ballot. (Remember the mauling Bill Clinton got from Newt Gingrich's Republicans in 1994.) This time, it will be much harder to attack Mr Bush. This is not just because some people will say it is unpatriotic to criticise the president. Rather, it could be pointless to do so when his opinion-poll rating has been more than 85% for months. Until those ratings start to fall, the blows will simply glance off, and may rebound on the attacker.

Who squandered best?

Some Democrats argue that Americans can perfectly well distinguish between the president (good man, even though they disagree with him) and Republicans in Congress (utter morons, who are leading the country to wrack and ruin). The trouble is that, thanks to Mr Jeffords, they themselves control the Senate, so it is rather unconvincing to go around blaming everything on Capitol Hill. So most of them have lined up behind Tom Daschle's strategy of supporting the president abroad, but blaming him for everything at home—particularly “the Bush recession” and his “squandering” of the budget surplus he inherited.

This is unlikely to sway the contest decisively. Most voters blame the recession on the fluctuations of the business cycle, or Osama bin Laden—not on the president. They know the recession began last spring, when Mr Bush had barely taken office. As for the blame game over the vanishing surplus, Democrats also want to blow the surplus on a stimulus package. And their stimulus plan is no less disgraceful than the Republicans', the only difference being that they want to pay off the unions, whilst the Republicans favour big business. As long as “stimulus package” is indistinguishable from “gravy train”, neither party will make much mileage out of their economic plans in 2002.

Two more technical features reinforce the probability of stalemate this year. First, the 2002 elections will take place after a round of redistricting (which adjusts constituencies to take account of population shifts). The incumbent politicians in charge have outdone themselves, reducing the number of genuinely competitive seats to just six or eight in the Senate. Second, those few competitive seats are evenly divided between the parties. The Democrats claim to have an advantage because there are more Republican Senate seats up for grabs than Democratic ones and more Republicans are retiring, which means losing the advantages of incumbency. But most of the “open” seats are in states which vote reliably for one party or the other. Of the genuinely competitive Senate seats, three or four are Democratic, and the same number Republican.

In short, there is little room for big political swings and little indication of them either. September 11th brought Americans patriotically together. Several months later, it should return politics to something like the fractious stalemate of 2000.

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Argentina

Between the creditors and the streets

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From The Economist print edition

EPA

The task of Eduardo Duhalde is to try to mend a broken nation

EPA

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“ARGENTINA is bust. It's bankrupt. Business is halted, the chain of payments is broken, there is no currency to get the economy moving and we don't have a peso to pay Christmas bonuses, wages or pensions.” Thus Eduardo Duhalde, in his speech to Congress after it had chosen him as Argentina's president on January 1st.

At least Mr Duhalde, a Peronist former governor of Buenos Aires province, showed a sense of realism about his country's plight. That had been lacking in the two men who preceded him in the job (two others briefly stood in, too). As popular anger boiled over at recession, unemployment, economic decline and, finally, controls on bank withdrawals, Buenos Aires erupted in the days before Christmas. Looting and mass demonstrations drove Fernando de la Rua from the presidency on December 20th, after just two years of a government that had frittered away all of its initially considerable political support.

In his place, Congess installed Adolfo Rodriguez Saa, the Peronist governor of San Luis province. His eight days in office were a brief but grotesque caricature. The Peronists, the largest party in Congress, had chosen Mr Rodriguez as a stopgap;

many of them wanted a fresh presidential election in March. Mr Rodriguez lost the support of his party, by showing signs of wanting to stay longer, and that of the public, by appointing officials tarred by corruption allegations. His fate was sealed by the citizens of Buenos Aires who, for the second time in two weeks, unseated a president by taking to the streets to bang pots and pans in protest.

That forced the Peronists to rethink. Unlike Mr Rodriguez, Mr Duhalde won the support of the two parties from Mr de la Rua's former Alliance; he was elected by 262 votes, with only 21 against. The plan is for him to serve out the remaining two years of Mr de la Rua's term and, he says, not run for re-election. He is expected to offer cabinet jobs to the Alliance parties. His tasks are to sort out the economy, quell the tide of popular protest—and, in the process, save the political system.

Ironically, Mr Duhalde was defeated by Mr de la Rua in the 1999 presidential election, taking only 38% of the vote, an unusually poor peformance for a Peronist. In a congressional election in October, he was elected as a senator for Buenos Aires province (though with even fewer votes there than he had won in 1999). He is the embodiment of Peronism's powerful political machine in the rustbelt around Buenos Aires. His political career has been dogged by corruption claims (never proved).

A populist at heart

At heart, Mr Duhalde is a populist. He told Congress he would break with "this perverse [economic] model responsible for the country's destruction". He was likely to appoint an industrialist to a new Ministry of Production, heralding a more interventionist and perhaps more protectionist approach. His probable economy minister, Jorge Remos Lenicov, held the same post in Buenos Aires when Mr Duhalde was its governor.

But Mr Duhalde's fate is to be an economic fireman, and he will have little room for manoeuvre. He confirmed that Argentina will formally default on its debt, an overdue admission of an inescapable reality. The government has not had access to international credit (except from the IMF) since July. It had already repatriated nearly all of its liquid foreign assets to avoid their seizure by creditors. Argentina's status as a financial pariah means that Mr Duhalde will have little option but to continue Mr de la Rua's efforts at fiscal austerity.

The new government said it would announce an economic plan on January 4th. The most pressing decision is what should take the place of the currency board that has pegged the peso to the dollar for the past decade (see article). Then there is the partial freeze of bank deposits imposed last month, under which only $1,000 can be withdrawn each month. Mr Duhalde promised that depositors would eventually recover their funds in their original currency. But until confidence in economic policy has been restored, lifting the controls would merely provoke a stampede of money from the banks.

The bank controls have enraged the middle class. The ensuing loss of liquidity, together with a freeze on foreign-exchange transactions since Mr de la Rua's resignation, mean that "the country is producing zero", says Abel Viglione of FIEL, an economic think-tank. Although some retailers have started putting up prices in anticipation of a devaluation, the drying up of imports has led to shortages of, for instance, pharmaceuticals and newsprint.

Allowing the peso to depreciate is unavoidable but will not be popular: many Argentines value the price stability brought by the currency board, while the middle class have dollar debts (though the government might switch these to pesos). Mr Duhalde must deliver this nasty economic medicine against a background of deep public frustration. Talk from politicians of a potential "civil war" has started to look less fanciful. Nobody is calling for the army to step in, but in a country that suffered half a century of intermittent dictatorships, culminating in a repressive junta in 1976-82, political cynicism and street violence are especially worrying.

Although the latest protests were largely peaceful, small groups of demonstrators fought police and set fire to part of the Congress building. As Mr Duhalde was being chosen, battles raged outside Congress between his supporters and left-wing opponents. But for now, the looting has stopped. Some argue that it was orchestrated. Luis D'Elia, a leader of a protest movement in a poor suburb of Buenos Aires, says that former secret policemen and Peronist activists were seen winding up crowds. But he says that the main cause of the disturbances was desperation.

Some 14m Argentines, or more than two in five, now live in poverty, according to Artemio Lopez, a local economist. The country's proud middle class, unusually large for a Latin American country, is shrinking fast. Meanwhile, cuts in welfare spending mean that in the past two years the numbers without enough income to cover basic food needs have doubled to 5.5m, according to Mr Lopez. The inefficiency and corruption that blight the welfare system at least offer scope for reform. But even if Mr Duhalde wants to carry this out, it will take years to have an impact.

EPA

How long can Duhalde last?

The new government does not have that luxury. The broad political support for Mr Duhalde is deceptive, and may prove unstable. Mr de la Rua's Radical party backed him mainly to avoid a presidential election, in which it would have been punished for its failure. And though the Peronists fell in behind Mr Duhalde, they remain deeply divided. Mr Duhalde nurses a bitter feud with Carlos Menem, Argentina's president from 1989 to 1999. Other party leaders with presidential ambitions, such as Jose Manuel de la Sota, the governor of Cordoba, are angry over the scrapping of the March election.

In any case, in today's Argentina political backing no longer translates automatically into popular support. So discredited are politicians that in October's congressional election more than 25% of the electorate failed to carry out their legal duty to vote. Of those who did, 21% cast blank or spoiled ballots. The demonstrators who have taken to the streets with their pots and pans on the hot summer nights of the past fortnight have carried only the Argentine flag. They refused to allow any political parties to raise their banners. Though the Peronists were slow to acknowledge the fact, the protests were directed at the entire political class, and at a judiciary which has failed to check corruption.

As Mr Duhalde took office, Buenos Aires again reverberated to the sound of a dissatisfied public beating its pans, this time to demand elections. His job was never going to be easy: since 1958, only three of Argentina's 18 presidents have completed their allotted terms. Mr Duhalde, far more than Mr de la Rua, typifies Argentina's discredited old-style politicians. He has the lowest approval ratings of any incoming president in memory. It is to this unlikely saviour that Argentine democracy has now been entrusted.

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Argentina's ugly economic choices

No good options

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The economic pain can be shared out in many ways

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PITY Eduardo Duhalde, Argentina's latest president. His economic options range merely from painful to extremely painful. At issue is who bears the pain and how long it lasts. And that depends largely on Mr Duhalde's choice of exchange-rate regime. With strict capital controls in place, as well as a partial freeze on withdrawing deposits from banks, the “convertibility” system—which pegged the peso to the dollar under a currency board—is in effect dead. Possible replacements range from a freely-floating peso to dollarisation.

Outside Argentina, most observers favour a floating currency. Left to the market, the price of the peso would fall substantially. A more competitive exchange rate, many argue, is Argentina's best path out of recession, and offers the best buffer against external economic shocks. Most big emerging economies, including Brazil and Mexico, now have floating exchange rates.

Unfortunately, floating the peso involves sizeable risks and substantial costs. The risk is that the currency would depreciate too much, causing high, possibly uncontrollable, inflation. Political turmoil, the risk of government profligacy, lack of confidence in the country's economic team and a torrid history of hyperinflation are all reasons why a floating peso might sink. The immediate cost of a float—or any other move away from dollar parity—is bankruptcy for many individuals, firms and banks. That is because most debts are denominated in dollars, while most incomes are in pesos.

At first, a freely floating peso would almost certainly depreciate too much. But Brazil's experience when it devalued in 1999 suggests that this “overshooting” can be brief, and can be mitigated by a central banker whom markets trust, if he has an inflation target to guide monetary policy.

But Argentina's economy is different from Brazil's and its new economic team is said to be scared of a free float. An alternative option they are studying is a limited devaluation (perhaps of 40%) and a repegging of the peso to a basket of currencies that includes the dollar, euro and Brazil's *real*. Unfortunately, the history of exchange-rate pegs in emerging economies in the 1990s is not a pretty one. This scheme might simply set up another currency crisis in the weeks ahead, particularly if Mr Duhalde fails to keep the fiscal purse-strings tight.

Some economists argue that a better way to avoid overshooting and future crises, but still get the benefits of a cheaper currency, would be to devalue and then adopt the dollar. Dollarisation would, in principle, remove the currency risk involved in investing in Argentina and so, in theory, bring lower interest rates. But it would enshrine the exchange-rate rigidity which Argentina has just shown it cannot live with. Anyway, Mr Duhalde is known to oppose this approach.

By ending parity between the peso and the dollar, all these options would destroy solvency across the economy. None of the repair options are painless. Perhaps the worst approach would be to let the inevitable bankruptcies take their course without a coherent plan for restructuring businesses and banks. The ensuing chaos and credit crunch would undoubtedly deepen Argentina's recession unnecessarily.

Far better to de-dollarise assets and liabilities in advance. One neat option, proposed by Ricardo Hausmann of Harvard University, would be to convert the dollar-denominated assets and liabilities of the banking system, as well as public debt, into inflation-indexed pesos before floating. Though the protests of foreign creditors could probably be ignored, the pot-banging middle classes of Argentina are likely to balk at their dollar accounts becoming pesos (indeed Mr Duhalde has already promised not to bring that

about). Moreover, across-the-board de-dollarisation distributes pain unfairly: those who have borrowed in dollars do far better than those who borrowed in pesos.

More likely is a middle course, where some debts (such as mortgages) are redenominated across the board, while others (such as corporate debt) are left to fend for themselves. Depositors might be hit more subtly, perhaps by changing the interest rate and maturity of their deposits and retaining restrictions on deposit withdrawals. The remaining holes in banks' balance-sheets would be plugged with large dollops from the government—and from shareholders' pockets.

At best, this balance-sheet restructuring will be time-consuming and messy. But there is no feasible alternative. A third currency, suggested by last week's president of Argentina, would place most pain on government workers who would be paid in it, while failing to provide the real depreciation the country needs. The sole course that would avoid the chain of bankruptcies, but only for now, is swapping the peso for the dollar at par. This would herald several more years of deflation. And that deflation, as Nouriel Roubini of New York University has pointed out, would cause exactly the same damage to the solvency of firms, banks and households as devaluation—but in slow-motion. In short, bankruptcies are inevitable, whatever the decision. Over to you, Mr Duhalde.

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Brazil and Argentina

Fingers crossed

Jan 3rd 2002 | SAO PAULO
From The Economist print edition

Brazil hopes it can escape collateral damage

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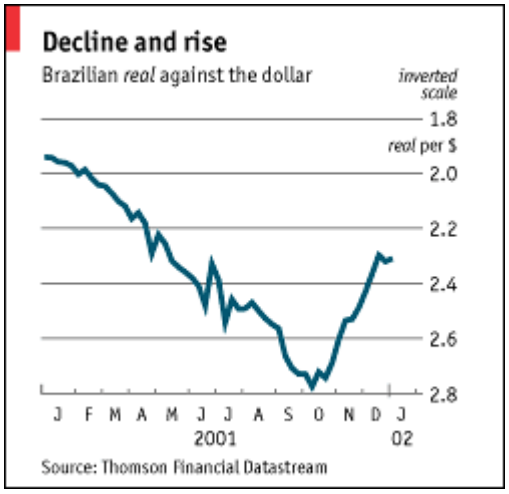

"THERE are no reasons for contagion," President Fernando Henrique Cardoso assured Brazilians this week, as the economy of his country's biggest neighbour came to a halt. That is not how it looked a few months ago, when Brazil's currency, the *real*, hit an all-time low, and the spreads on its bonds (the risk premium demanded by investors) followed Argentina's sharply upwards. But since October, as Argentina's condition has worsened dramatically, Brazil's currency, and its bonds, have strengthened (see chart). Is Mr Cardoso right to be so sanguine?

Certainly, Brazil's mid-2001 financial wobbles were due partly to home-grown problems, such as electricity shortages. But its apparent insulation from Argentina's woes shows that investors are now more capable of discerning differences between countries than they were in the emerging-market panics of the past. Many investors who long ago forecast that Argentina was heading for default sold its bonds and shares and invested the proceeds in Brazil, says Damian Fraser of UBS Warburg, an investment bank. Chile's currency and financial markets followed a similar path to Brazil's this year, too.

Argentina is Brazil's main partner in the Mercosur trade block. But neither country is a great international trader. Brazil's exports to Argentina amounted to only 1% of its GDP in 2000. Even so, Argentina's economic collapse has put Mercosur itself under great strain. Trade within the block (Paraguay and Uruguay are also members) shrank by 10% last year, according to an estimate by the Inter-American Development Bank. Intra-Mercosur exports now account for only 18% of its members' total exports, down from 25% at their peak in 1998. In the past two months, trade between Argentina and Brazil has fallen even more sharply. Cash-strapped Argentine firms have cut imports. But Brazilian firms, too, have ordered less from Argentina, perhaps fearing the products might not be delivered. Some Brazilian exporters have been able to offset lost orders in Argentina by selling to other markets, taking advantage of their currency's relative weakness.

Mercosur's future has been in doubt. Some Argentines, such as Domingo Cavallo, the former economy minister, have blamed their country's problems on Brazil's 1999 devaluation. In fact, Argentina still has a trade surplus with its neighbour. Both countries have broken Mercosur's increasingly ignored rules. Argentina has fiddled with its tariffs; Brazil is seeking its own trade deals with Mexico, Russia, China and India. Brazil's officials have said they would regard Mercosur as finished if Argentina were to adopt the dollar. If its new government floats the peso, however, the block could eventually revive.

For now, Brazilians are keen to stress their differences with their troubled neighbour. While Argentina's fiscal austerity measures were too little and too late, Brazil has been generating large primary fiscal surpluses (ie, before debt payments) for several years. And while Argentina was stuck in its fixed-currency straitjacket, the floating *real* has helped ease worries about Brazil's current-account gap, making its exports more competitive and imports more expensive. After six years of trade deficits, Brazil enjoyed a surplus of around $2.6 billion in 2001.

Another reason for investors' mid-year worries about Brazil was the dawning realisation that Mr Cardoso's term ends in December 2002. Polls were showing that his likely successor was Luiz Inacio Lula

da Silva of the left-wing Workers' Party, who in the past has talked of “renegotiating” Brazil's public debt. But recently Mr Cardoso's fractious centre-right coalition has pulled itself together. Congress has made progress on long-delayed reforms, such as measures to liberalise Brazil's outdated labour laws and to end a state monopoly on oil imports. More importantly, Roseana Sarney, the conservative governor of Maranhao state, has begun to catch up with Mr da Silva in the polls. And Argentina's violent chaos is hardly likely to recommend a debt default to Brazil's voters.

But none of this means that Brazil can stop worrying about catching something nasty from its ailing neighbour. Argentina's collapse has raised questions about how much debt an emerging-market country can safely carry. And Brazil's election, and the post-Cardoso era, still involve uncertainties. If Argentina's problems deepen, as they may do, investors' sensitivity to any signs of fiscal backsliding in Brazil will only increase.

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Peru's fire

Death foretold

Jan 3rd 2002 | LIMA
From The Economist print edition

Poverty and overstretched police lie behind an inferno

MESA REDONDA, just to the east of Lima's colonial centre, is a maze of narrow streets, crumbling houses of wood and adobe, and a few cement shopping galleries that mainly house wholesalers of plastics, textiles and clothing. In December, its congested streets also become the main site for the sale of the fireworks with which Peruvians traditionally welcome the new year. For weeks, there had been warnings that this was a potential death trap. Lima's municipal government even declared the area an “emergency zone”, to control the sale of fireworks. It was all to no avail. On December 29th, Mesa Redonda was engulfed by a huge fire, which killed at least 290 people, injured hundreds more and destroyed four city blocks.

It started when fireworks in a vendor's cart ignited at 7pm. In a swift chain reaction, the flames jumped from cart to cart, sending rockets into the nearby galleries and run-down homes. Hundreds of shoppers were milling through the streets and galleries when the blaze began.

President Alejandro Toledo declared two days of national mourning, and a crackdown on firework sales; more than 35 tonnes were confiscated and burnt within hours. He called for new laws to ban their production, sale and import.

No need: since 1995, Peru has had exactly such a law. Even so, it imported more than 1,000 tonnes of fireworks last year. Antero Flores Araoz, the congressman responsible for the 1995 law, blamed the police, the customs and the Interior Ministry for not enforcing its provisions.

The authorities have been trading excuses, some of them reasonable ones. The police say they were too understaffed to respond to the municipality's call for help. Lima's mayor, Alberto Andrade, successfully moved thousands of street vendors away from the crowded centre in the mid-1990s, but they have crept back again to areas such as Mesa Redonda and the nearby Central Market.

Fernando Rospigliosi, the interior minister, says that poverty is part of the problem. Fireworks are an important source of income for Lima's army of street vendors. That means that a ban on their sale is all but unenforceable, even with a far bigger and more effective police force than the outfit bequeathed to Mr Toledo by Vladimiro Montesinos, the corrupt spymaster who ran Peru's security forces for a decade.

Despite the hundreds of families in mourning, fireworks were still on sale over the weekend. The Lima sky lit up at midnight to blast out the old year. Better than a ban on fireworks might be an effort to educate Peruvians about their dangers—an effort that might also be made in China, where over 30 people died this week in a fireworks accident.

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Politics in Mexico

Taxing

Jan 3rd 2002 | MEXICO CITY
From The Economist print edition

Congress has its own ideas on reform

VICENTE FOX is a man of big boots and a big grin—all part of a cheery charisma that helped him win Mexico's presidency. But his year-old government has struggled at the fine art of haggling with a Congress he does not control. So nobody was surprised when, in the dying hours of last year, his ambitious tax-reform plans were mangled out of all recognition.

Mr Fox's aim was to increase Mexico's tax revenues from their current paltry level of around 11% of GDP. This would reduce the government's dependence on wildly fluctuating oil revenues, which last year amounted to 6% of GDP. As if to make the president's point, in December the finance ministry lopped 20 billion pesos ($2.2 billion) from the 2002 budget, after lowering its forecast for oil prices next year.

The sticking-point of the reform, over which the government had argued with legislators for months, was the levying of value-added tax on food and medicines. This would have contributed an extra bite worth nearly 2% of GDP but it would have fallen hardest on the country's 40m poor. It did not help that Mr Fox failed to consult even his own National Action Party (PAN), let alone opposition legislators, before sending the tax bill to Congress last April. After nine months of negotiations, PAN deputies abandoned Mr Fox's proposal, and backed an opposition plan for smaller tax increases that fall more heavily on business and the rich.

The result is a reform that will increase the revenues by only around 1.2% of GDP, through a mishmash of new taxes on cellular telephones, cigarettes, hand-held computers and other luxury goods. Much of the money will merely make up for lost oil revenue, lower the budget deficit or boost the resources of state and local governments. That leaves little for the big increases in federal spending on education and infrastructure that were promised by Mr Fox in his campaign. Instead, the government is resorting to private finance for some of its public projects: spending on such ventures has nearly doubled. These are considered to be outside the formal budget, but add to the government's debt, and so place a question-mark over its commitment to fiscal austerity.

The fate of the tax reform bodes ill for Mr Fox's next big plan, to open up the state-dominated electricity industry. The government wants to create separate generation, transmission and distribution businesses, and end the state monopoly except in the national transmission grid. These are sensible ideas, but radical in a country where energy is still a nationalist totem.

The tax debate has given Congress, a rubber stamp during seven decades of rule by the Institutional Revolutionary Party (PRI), a new sense of its own independence. It has also shown that the PRI, which holds a majority in Congress, hopes to return to power by painting Mr Fox's policies as favouring foreigners and the rich.

The lesson for Mr Fox is to find some sharper political operators, more adept at congressional arm-twisting. The president might also use his authority to appeal to ordinary Mexicans to push Congress into supporting his plans. The man who brought genuine democracy to Mexico by ousting the PRI from the presidency must now find a way to work more effectively within the constraints of democracy's institutions.

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India and Pakistan

Eyeball to eyeball

Jan 3rd 2002 | DELHI AND LAHORE
From The Economist print edition

AP

But the threat of war may encourage sensible thinking on terrorism and on Kashmir

Get article background

THEIR armies continue to menace each other and worries of nuclear hostilities persist, but India and Pakistan now confront each other more as gamblers than as gladiators. The latest crisis in their relations began on December 13th, when terrorists, apparently trained in Pakistan, attacked India's Parliament in an attempt to murder senior politicians, and ended up killing several security officers. India demanded that Pakistan should act against the terrorist groups. It reduced transport and diplomatic links with Pakistan and mobilised its army. Alarmed, the United States and other outside powers sought compliance from Pakistan and cool-headedness from India.

The pressure has had some effect. Pakistan's military-led government has arrested the leaders of the two groups India blames for the attack, Lashkar-e-Taiba and Jaish-e-Muhammad, along with about a hundred of their followers, and frozen their accounts. India's foreign minister has described the arrests as a “step in the right direction”. There is talk, though no certainty, of a meeting between Pakistani and Indian officials at a regional summit in Katmandu that begins on January 4th. Neither country wants war. Britain's prime minister, Tony Blair, will try to forestall one in his current, previously planned visit to the region. But while the glaring lasts, India and Pakistan will manoeuvre for advantage in their half-century-old dispute over Kashmir, the Muslim-majority state that is divided between them.

The crisis is far from over. India does not think Pakistan's crackdown has gone far enough. It wants more, and more-senior, terrorists behind bars, and scoffs at the immobilising of nearly empty bank accounts. It has demanded from Pakistan the extradition of 20 suspected terrorists. Lashkar-e-Taiba and Jaish-e-Muhammad themselves say they have merely shifted their offices from Pakistan proper to Pakistan-administered Kashmir. Worse, the terrorism has not stopped. Three attacks were reported on January 1st, one involving the murder of six civilians in India's part of Kashmir. The next day, grenades tossed near Kashmir's parliament killed a policeman and injured 20 other people. Such attacks could still provoke Indian retaliation inside Pakistan.

Oddly, though, the persistence of terrorism points to one reason why India and Pakistan may not fight: Pakistan's president, Pervez Musharraf, seems to have limited control over it. The importance of this to Indian thinking is hard to judge because it is new. Groups such as Lashkar-e-Taiba and Jaish-e-Muhammad have been allies of successive Pakistani governments. Their cause of freeing Kashmir from Indian rule has been a primary aim of Pakistan's foreign policy since its founding. Pakistan's military Inter

Services Intelligence agency (ISI) has helped them in all sorts of ways.

The American war on terror has shaken that alliance, if not quite broken it. The militant groups, which share the ideology of the Taliban and al-Qaeda, regard General Musharraf as a traitor for joining the American side. Al-Qaeda's attacks on America have discredited terrorism in international eyes as a means of ousting India from Kashmir, if not the end itself. General Musharraf hoped to preserve a distinction between terrorists and Kashmiri freedom fighters, but India, most foreign governments and the terrorists themselves will not let him. On December 26th the United States branded Lashkar and Jaish terrorist outfits.

And so General Musharraf must find a way to deal with such groups that mollifies India and satisfies his allies in the international anti-terror coalition without abandoning the cause of Kashmir or provoking an uprising against his rule. This is fiendishly difficult. General Musharraf has been keen to stamp out religious violence within Pakistan; his foreign minister has promised to “co-operate fully” with India against terrorism. There is speculation that Pakistan will shift support from groups such as Lashkar-e-Taiba, which mainly recruits Pakistanis, to mainly Kashmiri outfits, such as Hizbul Mujahideen, and encourage them to attack security forces rather than civilians. But India is unlikely to accept this as amounting to a renunciation of terrorism.

Questions persist about how fully General Musharraf controls the ISI, though he recently replaced its chief. C. Uday Bhaskar, of the Institute for Defence Studies and Analyses in Delhi, calls the agency “an army within an army”, fired by ideology. Would the general survive a real crackdown on the terrorists? The assassination on December 21st of the brother of Pakistan's interior minister, who is leading the offensive against religious extremists within Pakistan, is being read as a warning. General Musharraf is not Mullah Mohammed Omar, the leader of the Taliban, but his successor might be. “It is not in our interest to push Musharraf beyond a point,” says Commodore Bhaskar.

If this is true, it would make little sense for India to go to war against him. But the threat of military action is India's only means of defending itself, of forcing the general to tackle the militants, and of mobilising other countries to intercede with the general.

One way out of the maze is to offer Pakistan an incentive to stop terrorism. India's prime minister, Atal Behari Vajpayee, sought to do this in his “new year reflections”, offering to walk “more than half the distance” to resolve disputes with Pakistan, including that over Kashmir. Serious Kashmir talks would make it easier for General Musharraf to curb the insurgents.

Though it has opened with portents of war, this might just be Kashmir's year. An election to the state's assembly is due in the autumn, and Mr Vajpayee has promised that it will be free and fair, which would make a change. The government has been trying to entice separatist Kashmiris to take part and hints that some form of autonomy will be available in exchange for peace. It is conceivable that the war scare will prompt India to resolve the intractable problem of how to incorporate Pakistan into a dialogue with Kashmiris without implying that India's sovereignty over the state is up for negotiation. The trouble is that Pakistan may deem unserious any process that forecloses this possibility. Mr Vajpayee's “more than half the distance” may thus look to General Musharraf not nearly far enough. In this gap, peace can easily go astray.

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Australia's inferno

The deadly fires of summer

Jan 3rd 2002 | SYDNEY
From The Economist print edition

Arson suspected

AP

IT IS usually the time of year when Australia's biggest city unwinds and has a good time. But this summer has brought cruel comfort for Sydney's 4m people and thousands more in the mountains and valleys behind it. Fanned by winds roaring towards the Pacific coast from the hot western plains of New South Wales, some of the worst bushfires Australia has seen have turned much of the state into an inferno, reaching the northern suburbs of Sydney itself.

The fires started on Christmas Day and have continued ever since, despite the efforts of thousands of fire-fighters in New South Wales, and reinforcements from other Australian states and New Zealand. Sydney's summer sun has disappeared under a blanket of smoke so thick at times that iconic structures such as the Sydney Opera House and the harbour bridge could not be seen from the city centre, and flights have had to be diverted to other places. Soot and ash have blown on to balconies and footpaths, and the foreshore of Bondi Beach has been blackened by fire debris.

Fires are an ever-lurking threat in Australia, but recently they have been breaking out with disturbing frequency. Forest debris used to be got rid of by burning in cooler months, but conservationists objected. Huge fires eight years ago killed four people. No one has died so far this time, but more than 150 houses and 500,000 hectares (1.2m acres) of land have been burned in 66 fires across New South Wales. Lightning started some, and a deadly combination of dry conditions fuelled them: high temperatures, low humidity and strong winds. But the hand of man may have contributed. The police have arrested 21 people suspected of starting fires and set up a special force to track down “serial arsonists”. Australians have once again been reminded of the fragility of their hold on their dry continent.

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Afghanistan

A long cold trail

Jan 3rd 2002
From The Economist print edition

Has America abandoned the search for Osama bin Laden?

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THE American aircraft that bombed the village of Qalaye Niazi on December 30th, killing more than 100 people, were looking for Osama bin Laden and his al-Qaeda fighters. So say American military officials, who claim their target was a compound used by al-Qaeda and senior members of the Taliban. Qalaye Niazi is in Paktia province, bordering on Pakistan, which lies roughly along the route that Mr bin Laden and his followers are thought to have followed in flight.

That the aircraft were looking for him at all is almost surprising. In recent days, America seems to have given up the hunt. The Taliban's spiritual leader, Mullah Mohammed Omar, is still being sought near Bagran, 160km (100 miles) north-west of Kandahar, where he is said to be holed up with 500 men; a local intelligence chief says he is negotiating his surrender. But Mr bin Laden's trail has gone cold, and so, it seems, has the effort to catch him. President George Bush, who once put the capture of Mr bin Laden, “dead or alive”, at the top of his war aims, now says his main priority is a stable Afghanistan.

When the underground tunnels at Tora Bora were smashed on December 7th, Donald Rumsfeld, America's defence secretary, said they would be searched with some urgency. In practice, the job has been left to Afghans who have no great enthusiasm for it. They are sifting the rubble rather slowly, working in the freezing cold in thin trainers and jackets, and trying to make a profit by selling real or fake finds to journalists. From their warm bases, the Americans say they are not worried by the slowness of the cave searches. They fear being accused of wanting to take control of a piece of Afghanistan if they get too involved. Besides, nothing of great intelligence value has come from the caves yet.

A remote possibility exists that, under the rubble of the caves, Mr bin Laden lies dead. His latest video was probably made some weeks ago. But the Americans think he is probably still alive, and Mohammed Fahim, the defence minister of the interim Afghan government, claims he is in Peshawar, in Pakistan, where he set up a service network in the early 1980s for Afghans fighting against the Russian occupation.

Wherever he is, the Americans must bear some of the blame for failing to catch him. The war in Afghanistan has been, in general, a masterly piece of delegation, with American special forces prodding Afghan warlords into doing their fighting for them. Although the number of civilian casualities is now said to match the thousands killed in the twin towers, very few American troops have died in this war. The drawback, however, is a failure to control the behaviour of the warlords. Particularly in the east of the country, along the Pakistani border, local Afghan chiefs were helping al-Qaeda and Taliban fighters escape from the country even as American forces were endeavouring to catch them.

If America abandons the aim of getting Mr bin Laden, its chief remaining job is to impose stability on Afghanistan. This continues to look difficult. The warlords still want to assert themselves, and the peacekeepers are not established yet. So far, about 300 British troops are in Kabul, with more expected, and the Afghans have agreed that an international security force authorised by the United Nations should be deployed in the capital and, eventually, in other cities, with numbers rising to about 3,000 by mid-January. But the interim government is uneasy.

Recognising the fragility of the situation, Mr Bush conceded on December 28th that American troops would have to stay in the country for a long time. The reason they went in the first place, though, may already have got clean away.

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Taiwan and China

Drifting together

Jan 3rd 2002 | TAIPEI
From The Economist print edition

Economics is slowly uniting Taiwan and China

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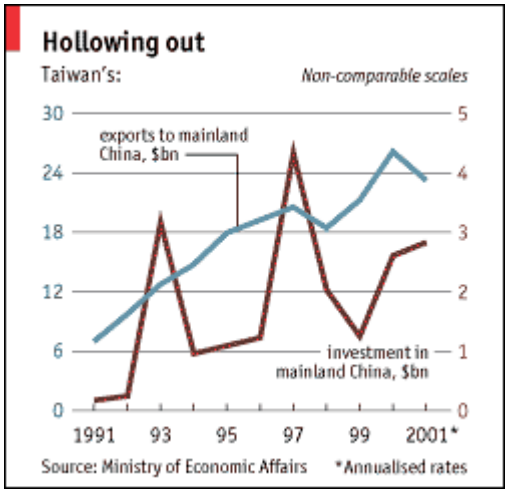

JANUARY 1st saw Taiwan's entry into the World Trade Organisation (WTO), after a decade of effort. In the coming weeks, details are to be released of new measures allowing direct investment by Taiwanese companies in mainland China and the easing of restrictions on the import of mainland goods. Both events will help to make economic relations between Taiwan and China more normal.

Taiwan badly needs a new economic relationship with the mainland. Its manufacturing industries have invested more than $60 billion in China in the past few years, using indirect routes, mainly Hong Kong. Yet partly because of the Taiwanese government's restrictions on such investments, only a trickle of profit has returned. Taiwan still bans most direct trade, transport and communication links (known as the three direct links) with China—thus pushing up costs for the 50,000 Taiwanese businesses established there. For an economy that recorded its worst recession ever in 2001, these are heavy burdens.

The WTO will not force Taiwan and China to establish direct links. China particularly would be reluctant to involve the WTO in any politically sensitive dealings with Taiwan. But pressure is bound to grow on Taiwan to grant China, which joined the WTO three weeks ago, the same privileges as its other trading partners, all of which can freely use Taiwan's ports and airports. President Chen Shui-bian of Taiwan has said he would like talks with China on the three links. The difficulty is that China insists that Taiwan must accept in advance the principle that only one China exists, and that Taiwan is part of it. Mr Chen refuses.

Taiwanese officials predict the island's economy will grow by over 2% this year, after shrinking by about 2% in 2001. But the recovery will be hard to sustain unless the island can restructure its economy by moving manufacturing offshore to exploit cheap labour and land elsewhere—such as China—and developing new strengths in areas such as services and research and development. “The mainland is catching up. So Taiwan must upgrade quickly,” says the economics minister, Lin Hsin-i.

Having strengthened his political mandate in the parliamentary elections held on December 1st, Mr Chen says he is turning his attention to the economy. To do so effectively, he will need to go against the instincts of some of his Democratic Progressive Party's Chinaphobic members and break down barriers to closer economic ties with the mainland. In July his own deputy, Vice-President Annette Lu, remarked that China's efforts to attract Taiwanese business were intended to “increase its economic clout against Taiwan to complement its military intimidation.”

Many in Taiwan say that opening up to China is exacerbating unemployment, which reached a record 4.5% last year. In the short term, WTO membership will make matters worse. Officials predict the loss of another 20,000 jobs in the first 12 months, mainly in agriculture, as Taiwan lowers import barriers.

Mr Chen, however, seems to be moving in the right direction, encouraged by business and the relatively pro-China opposition. His government now accepts that protecting increasingly uncompetitive industries could push Taiwan into long-term decline. Mr Chen convened a cross-party forum in August and backed its view that a freer flow of trade across the Strait would help Taiwan restructure and encourage the

repatriation of profits.

At the August forum, Mr Chen accepted that the previous “go slow, be patient” policy towards investment in China should be replaced by one of “active opening, effective management”. Since then, Taiwan has allowed offshore banking units of Taiwanese banks to deal directly with their mainland counterparts. It has also lifted a ban on certain high-tech mainland production, such as notebook computers, mobile phones and DVD players. These changes will not necessary lead to more new investment. Many companies had been flouting the restrictions anyway. But they amount to an admission by Taiwan that closer integration with China is inevitable.

WTO membership will also help Taiwan make needed economic changes at home. The island's ailing banking sector needs a serious shake-up to resist the onslaught of foreign competition. Bad loans rose to another record high at the end of September, amounting to nearly 8% of the total, according to the Ministry of Finance. Some experts say the real figure could be twice as high. In recent months the government has forced the takeover of insolvent financial institutions and taken steps to encourage consolidation of Taiwan's fragmented financial-services industry.

But Taiwan needs more of the mainland's money. The Taiwanese government, citing reasons of economic security, remains reluctant to allow extensive Chinese investment in Taiwan, although the restrictions are expected to be eased a bit now that both are WTO members. From January 1st Taiwan began accepting mainland tourists for the first time in 50 years—but only those living in third countries. Last week a cabinet committee decided to renew for another year the island's year-old experiment with “mini-direct links” between the tiny offshore islands of Quemoy and Matsu and mainland China. Links with the main island of Taiwan are not yet on the cards. But both countries' economies need them.

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Egypt's economy

Lonely as a pyramid, without tourists

Jan 3rd 2002 | CAIRO
From The Economist print edition

Reuters

Egypt's economic misfortunes, miseries and mistakes

Get article background

A RECENT cartoon in a Cairo daily shows Atef Ebeid, Egypt's prime minister, sitting up in bed sunken-eyed, hand clasped to his forehead. “I dreamed I was running Argentina,” he gasps.

Egypt is not Argentina. It is not ripe for popular revolt, and is not about to default on its relatively modest foreign debt. Like the sickly Latin giant, however, the Arab world's most populous nation is sliding haplessly into economic gloom.

Touted in the mid-1990s as a Tiger on the Nile, Egypt now looks like a toothless crocodile. A combination of falling exchange rates, share prices and property values has more than halved the country's wealth in the past three years. Capital flight, plus vain efforts to prop up the currency, have reduced its net foreign assets by two-thirds. Unemployment, unofficially put at 20%, is surging as private firms slash payrolls, even as 800,000 job-seekers enter the fray every year.

Officially, things are not so bad. Government figures show GDP growth slowing from an impressive 6% in 2000 to a still good 4.9% last year. But independent economists have come to doubt the government's numbers. Private estimates put last year's growth at 3% or less, and expect a contraction in the current year. They also reckon that the government may have been under-reporting its budget deficit by half, and covering up for dangerous quantities of bad debt held by the opaque state-owned institutions that still dominate the banking system.

Such qualms are not new, but the September 11th attacks and their aftermath have added more urgent trouble. Egypt earns most of its foreign income from what are, in effect, rents from sources such as oil, plus tourism, Suez Canal tolls, migrants' remittances and external aid. The global downturn has walloped all these at once. Tourism, which in the year to June 2001 pulled in a record $4.3 billion, has been hardest hit. The number of visitors plummeted by half in October, with cancellations stretching through the peak winter season. Oil revenues are also down by a third and, although recently discovered gas promises a rich reward, years of heavy investment are needed before payoff.

Egypt has suffered such shocks before, and bounced back. The 1991 Gulf war battered tourism, but ended with foreign creditors forgiving nearly two-thirds of the country's debt. This, and a subsequent IMF-sponsored reform programme that followed decades of muddled socialism, unleashed an investment boom that saw rich Egyptians repatriate an estimated $60 billion in foreign savings. The infusion helped

cushion the effects of the 1997 Asian crisis, as well as a bloody terrorist attack at Luxor that wrecked the 1998 tourist season. But several years of slow decline have deflated that cushion.

Like Argentina, Egypt chose to underpin its reforms with a rock-solid currency tied to the dollar and bolstered with high interest rates. This did inspire confidence, but as the dollar rose in value, Egyptian exports grew uncompetitive. Finance gushed into property and consumption rather than productive investment. The government itself accelerated the trend, releasing huge tracts of land to private developers while pouring tax revenues into expensive desert-reclamation projects.

During the 1990s, Egypt's share of world trade, already puny, fell by 20%. The share of manufactured goods in its exports fell by 25%. The result is that much of the country's disposable wealth is now sunk in half-built, fast-depreciating tract developments and tourist “villages”.

But the current malaise is not simply due to bad investment choices. Ten years of liberalisation have failed to uproot the dirigiste instincts forged during 50 years of one-party rule. Though some state assets were at first sold successfully, the momentum for privatisation has slowed under the weight of unemployment concerns and special interests. Jittery investors now have little enthusiasm even for such choice offerings as the telephone monopoly or the power grid, let alone rustbelt industries that still keep some 300,000 workers on government wages.

Erratic decision-making has also undermined confidence. Faced with a shortage of dollars in November, the government slapped controls on imports. This prompted a panicked black-market run on the Egyptian pound that eased only when the measures were dropped. A subsequent 8% devaluation of the currency was met with relief. Since then, however, the government has cancelled the licences of several exchange bureaus, signalling that it still intends to counter pressure on the currency with strong-arm tactics.

Egypt is crowded and poor, with income per person that is only a fraction of Argentina's. It also has far rowdier neighbours. Yet it is similarly well-endowed with resources, less indebted, and so strategically important that richer countries have traditionally been eager to bail it out. The real underlying problem, many local businessmen believe, is with a political system that has failed to put talent where it is needed most, in running the country.

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Saudi women

Getting their cards

Jan 3rd 2002 | JEDDAH
From The Economist print edition

Identity cards, with photographs, for Saudi Arabia's lucky women

Unrecognisable

SAUDI women, permanently veiled in public, experience particular problems in proving that they are who they say they are. Life is getting a little easier for some of them; they are being allowed their own identity card, including a photograph. Until now they were merely named as dependants on their male guardians' cards.

Ultra-conservatives, male and female, pronounced it unIslamic that women's faces should be thus revealed for unrelated men to see. Saudi women already have their pictures in their passports—if they are lucky enough to be allowed by their guardians (father or husband) to travel—but this, or so it is said, is not so troublesome since it is mainly foreign men who examine these passports, not a Saudi who might know the holder personally.

But the new identity cards, emphasises Prince Nayef bin Abdul-Aziz, who as interior minister authorised their issue, in no way indicate that Islamic rules can be disobeyed. The reason for introducing them, he has explained, is to combat fraud and forgery. In court battles, women often have a difficult time fighting false claims to their property and their bank accounts, and have great difficulty in establishing their identity in disputes over inheritance.

A woman has to produce two male relations who can confirm that she is who she says she is, and this can lead to abuse. A Saudi lawyer speaks of one inheritance case involving some 500m riyals ($133m) in which male claimants are alleged to have run off with the share of their female relations with the help of impostors, false documents—and no photographs.

To qualify for an identity card, a woman must be at least 22 and have the written consent of her guardian, as well as a letter from her employer if she is working. So far, more than 3,000 women have got their cards, and others are in line. Many are businesswomen, who greet this moment as an important step in their struggle to control their own affairs—though they still have to assign a man to look after most of the paperwork of the businesses they own.

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Zambia's election

How to lose an election

Jan 3rd 2002 | LUSAKA
From The Economist print edition

A victory for rigging and a split opposition

EPA

A little trouble with his words

"WE ARE the devil you know," explained Levy Mwanawasa, the ruling party's presidential candidate, shortly before Zambia's election on December 27th. Not exactly an inspiring slogan, but this week he and the Movement for Multiparty Democracy (MMD) managed to scrape into office. With 29% of the votes, Mr Mwanawasa won just a few thousand more than his nearest rival, Anderson Mazoka, a businessman.

Local and foreign observers, as well as the opposition, believe that a good bit of rigging played its part in this tight finish. EU observers agreed that the poll was flawed, and protesters in Lusaka, Zambia's capital, furiously demanded a recount, or a rerun. But Mr Mwanawasa, backed by Frederick Chiluba, who is standing down after ten years in charge, held firm. A judge rejected the opposition's petition for a recount and the new president was duly sworn in on January 2nd.

Zambia is peaceful and free compared with its neighbour, Zimbabwe, but few are convinced that the triple election—for president, members of parliament and local officials—was entirely fair. As usual in such embryonic democracies, the ruling party brazenly used government resources for its campaign. Mr Mwanawasa, who can be disarmingly blunt, thought it "proper" that he should enjoy official planes, cars, security guards and fawning coverage from the state media. "What would you expect?" he asked just before voting day.

Some people thought that the low level of voter registration was a ploy to discourage participation. But a similar fear that the chosen polling date, at the wettest time of year and near Christmas, would dampen voter interest, did not come to pass. Around 80% turned out, some queuing for over 12 hours and then voting by candlelight. Many polling stations were kept open until the next day.

People were eager for a chance to register the fact that ten years of democracy, and a very liberal economy, have brought them few gains. State companies have closed, unemployment has soared, less than one-fifth of Zambians have electricity in their homes, and exports have slumped. The residents, for instance, of Kafue, an industrial town that once bustled with workers at its textile and nitrogen factories, now talk of unemployment, the cost of sending children to school and stinking garbage.

While ordinary people suffer, they say, their leaders have grown fat on *nichekeleko*—cutting a slice for themselves. Kenneth Kaunda, who was president from independence in 1964 until 1991, agrees that corruption is rampant "from the very highest to the lowest in government". Transparency International, a corruption watchdog, ranks Zambia among the ten worst offenders of the 90 countries it monitors.

All these complaints helped the dapper Mr Mazoka, who once worked for the Anglo American mining company and had promised a better-run economy. Early results showed him and his United Party for National Development doing well in Lusaka, other towns, and in the south of the country. But there was then a delay while the votes were counted in the copperbelt, where the privatised mines are beginning to function well again, and many voters favour Mr Mwanawasa. It was during this period, says Mr Mazoka's team, that the election was rigged: ballot boxes allegedly went missing only to reappear elsewhere, parliamentary results that had been declared in favour of opposition candidates were rescinded and given to the MMD, which won about half the total seats.

Mr Mwanawasa's victory was dubious, and his campaign lacklustre: his George Bush-like slips of the

tongue even forced him to deny accusations that a car crash in the early 1990s had turned him into “a cabbage”. People may well feel cross enough to continue protesting against his presidency. Few like his association with Mr Chiluba, who remains leader of the MMD (though he promises to step down soon). Although Mr Mwanawasa resigned as vice-president seven years ago, complaining of sleaze, he calls his ex-boss a “great friend”, and has refused calls for a commission to investigate political assassinations and fraud.

But the opposition knows that it shares responsibility for the election outcome. The 70% of voters who opposed Mr Mwanawasa split their loyalty between ten power-hungry rivals. The withdrawal of one or two of them would have helped Mr Mazoka to victory. “We could have done it better,” he concedes wistfully.

This makes Zambia a very different story from Zimbabwe, where the opposition is united behind just one candidate, Morgan Tsvangirai. Zimbabwe holds its presidential election in March, and Robert Mugabe is determined to stay on. But it will take much more blatant rigging to beat Mr Tsvangirai than the relatively gentle business that kept Mr Mazoka out.

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Uganda's Karamajong

Disarming the cheerful cattle-rustlers

Jan 3rd 2002 | MOROTO
From The Economist print edition

When nomad life grows bloody, it is time to take away the weapons

NOT long ago, Karamajong cattle-herders typically went about their business with AK-47s slung casually over their shoulders. Now, they carry sticks instead. Barely a month since the Ugandan government launched a programme to rid Karamoja of its estimated 40,000 guns, the dusty roads of this remote north-eastern region already seem safer.

And about time, too. Modern firearms have grievously disrupted the Karamajong people's ancient, pastoral way of life. Like so many tribes in the region, the Karamajong measure wealth in cows: a man cannot marry without paying a bovine dowry. Cattle-rustling has long been common, but has grown dramatically more bloody in recent decades. Before the gun came to Karamoja, young rustlers carried spears and killed only sporadically. But in the late 1970s some cattle-keepers attacked an army barracks in Moroto, and seized the arsenal. Since then, cattle raids have turned into miniature wars. Two years ago, 500 people died in a single skirmish.

The government used to turn a blind eye to Karamajong gun-toting. Some politicians argued that they needed their weapons for protection, not only from each other, but also from cross-border cattle raids by well-armed groups, such as the Turkana of Kenya or Dinka of Sudan. Civil war in southern Sudan has ensured a steady influx of smuggled weapons. The resulting violence has scared off all but the bravest businessmen. The region remains the poorest in Uganda, with the highest rate of infant mortality, a pitiful level of literacy and virtually no commerce.

Until recently, Yoweri Museveni, Uganda's president since 1986, was not terribly concerned. Karamoja was too remote for its problems to affect the rest of the country. Besides, Mr Museveni's troops were busy quelling internal rebellions and taking part in the war in Congo. But over the past 18 months, after most Ugandan troops had been withdrawn from Congo, Mr Museveni has started to take an interest. The violence is spilling over. While watering their cattle in settled neighbouring districts, Karamajong nomads have also shot, raped and looted. At least 80,000 people have been forced to flee their homes.

About a month ago Mr Museveni began a determined effort to disarm the Karamajong, launching the campaign in person and camping out in Karamoja for two weeks. The results have been encouraging: over 6,000 guns have so far been surrendered, and hospitals say admissions from gunshot wounds have fallen. Drunken husbands are now apparently less likely to settle domestic brawls with bullets.

To police the borders and protect Karamajong kraals, a number of “local defence units” have been set up, staffed by volunteers but under army control. Several thousand Karamajong have joined. The government has promised to build a road along the Kenyan border, to make it easier to catch invaders.

But the obstacles remain. The government has had to extend its deadline for the surrender of weapons, because it needs more time to deliver the tools, oxen and small loans it has promised to those who have already handed in their guns. And though the Karamajong like Mr Museveni, they do not necessarily trust his army to keep them safe. The border is long, underpopulated and difficult to police. The defence volunteers are keen, but may become less so when they realise they will have to be away from their cattle for long periods. And so long as Kenyan and Sudanese raiders have guns, many Karamajong will want to keep theirs. Many are thought to be wrapping their Kalashnikovs in plastic and burying them,

just in case.

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About sponsorship

Germany and France

Long live the euro. Meanwhile, at the heart of Europe...

Jan 3rd 2002 | BERLIN AND PARIS
From The Economist print edition

Germany and France have long been the motors of the European Union. But neither half of the partnership is firing on all cylinders today

IT'S a glittering new currency, no doubt. But behind the new euro there is no glittering economy. Germany used to be the economic powerhouse of Europe. Today it is a drag. The economy shrank in the third quarter of last year, and probably in the fourth too, pushing growth in 2001 down to about 0.7%, the lowest in the EU, with little better expected in 2002. Nor can the government afford to throw Keynesian money at the problem: the budget deficit is perilously close to the 3% limit set for members of the euro-zone.

German business investment and consumer spending both remain weak. Exports, which used to fuel the economy, are beginning to falter. Bankruptcies, running at nearly 1,000 a week, are commoner than ever. Taxes and social-security contributions, which were cut in accordance with Gerhard Schröder's election promises in 1998, are creeping back up.

Rarely has the public mood been so jumpy. As well it may be. The number out of work, fast approaching 4m, is almost as high as when Mr Schröder smoothed his path to power with a promise to slash the figure—which is set to go on rising. That has not curbed the trade unions, in a particularly belligerent mood after six years of wage restraint. They are preparing for a hard bargaining round this spring. The powerful IG Metall union, with its 2.8m members, is to kick off the new round with a 5-7% claim, well above Germany's officially projected 1.5% rate of inflation.

Small wonder, perhaps, that the latest polls suggest that a coalition of the opposition Christian Democrats and the Free Democrats (Germany's liberals) might replace Mr Schröder's coalition of Social Democrats and Greens. The prospect of an upturn in the economy coming in time to influence the general election, due on September 22nd, looks increasingly slim.

Yet the messages are strangely mixed. Though one economic research institute's survey shows business confidence at its lowest level in eight years and still falling, two others, equally reputable, show a rise in the bosses' spirits. Voters feel glum about the general economic outlook, yet remain extraordinarily sanguine about their own situation; only 7% describe it as “bad”. A huge majority put unemployment top of their list of worries, yet nine in ten have no fear of losing their own job.

Most criticise the government's record, especially on the economic front, yet they continue to give Mr

Schröder himself enviably high approval ratings. And though they tell pollsters that they are ready for a change, 61% continue to believe that Mr Schröder will be returned to power.

Criticism of the government's record is coupled, oddly, with high approval ratings for Mr Schröder

The explanation is that the times are peculiarly uncertain. With experts disagreeing about prospects, ordinary people are understandably confused. At least a third are yet to make up their minds which way they will vote. Most apparently believe Mr Schröder when he blames last year's downturn in the American economy for Germany's own woes. Three in four Germans say that his failure to cut unemployment will not affect their vote. Most approve of his attempts to give Germany a greater voice in world affairs, and fully back his decision to involve Germany in the United States' “war on terror” in Afghanistan. They endorse his tough new security measures to fight terrorism. Most even support his continuing austerity programme, designed to balance the budget by 2006 and to start lowering Germany's towering public debt thereafter.

Yet there is concern that the radical reforms promised by the government when it came to power are slowing to a halt. “No other government has done so much in such a short time,” Mr Schröder proudly proclaimed at the Social Democrats' national congress in November. Well, yes and no. He can point to big tax and pension reforms; a shake-up of the armed forces under way; compensation for Nazi-era slave labourers; automatic citizenship rights for foreigners born in Germany; and, in a controversial bill still before parliament, measures to allow German employers to import from abroad the skilled workers that many badly need. But much has also been left undone.

The health system, schools and labour market are all crying out for reform. Nothing much is likely to be done in such politically sensitive areas before the general election for fear of putting off potential voters, though Mr Schröder may try to shore up his increasingly shaky reputation as a reformer by announcing vague plans for change after the election.

Yet the government has a trump card: the weakness of the opposition. When asked which party could best solve Germany's problems, barely one respondent in ten names the Christian Democrats. That may change, once the centre-right has decided—supposedly by the end of this month—who will lead it into the electoral battle. But so far Mr Schröder still looks the best bet for September.

Vive l'euro français

Over in France, President Jacques Chirac has been making much of the birth of the euro. A “victory for Europe after a century of heartbreak, war and trial-and-error”, he called it, and a “success for all French people, a reward for their efforts”. Fair enough: in the 1990s the French endured masochistically high interest rates on their way to euro-qualification, and now, after nearly seven centuries, they are entitled to count their blessings not in francs but in the new currency of which France can reasonably claim to be the true creator, a currency that they reckoned would keep Germany's economic power peacefully within an EU where France would still call the political shots. But could there be another message in the president's eloquent new-year address to the nation?

There could. A presidential election is less than four months away, and Mr Chirac would dearly love a second term. Did his appeal for “national cohesion” suggest that Lionel Jospin, the Socialist prime minister (and his own presumed election opponent), had divided the country? When he noted that “the first duty of the state is to be responsible for its citizens” and “in charge of a solidarity that must neglect no one”, was he referring to Mr Jospin's failure to reform France's pensions, clean up its environment and lower its crime rate?

Almost certainly he was. And with some good reason. For France's government, after almost five years in office, is looking a bit ineffectual. The “historic moment” of the euro's birth might have been even more historic had some banks and post offices not been unable to dish out the new currency when they reopened on January 2nd, because some of their staff were on strike, grumpily demanding more pay and better security. More significant for the average voter, most of the country's 55,000 family doctors were on strike for a rise in their modest fees for consultations and home visits.

Such pinpricks are embarrassing enough for a government that is supposed to be the workers' friend, not least because Mr Jospin's coalition includes the Communist Party. What could be more discomforting, however, is the wider context. Not so long ago, the government could justifiably brag about its management of the economy. Unemployment had fallen steadily from 12.6% of the workforce when Mr

Jospin came into office to less than 9%, leading him to suggest that full employment was achievable. The economy was growing by an annual average of 3.3% in the government's first three years; and institutions such as the OECD and the IMF were generous with their plaudits. French officials liked to say that it was now France, not sluggish Germany, that was acting as the EU's economic powerhouse.

They spoke too soon. France is still not nearly as sluggish as Germany, but it has fallen behind Britain, with its annoying free-market obsessions, and is threatening to slow still more. The latest figures, for November, showed that unemployment, which began to rise again in June, was 9%; that means some 2.4m people. The December figure, according to one forecast, may reach 9.4%. One financial newspaper's headline recently foretold “Stagnation and rising unemployment this winter”.

That prediction looks sound enough. France, the world's sixth-biggest trader, can hardly remain immune from recession in the United States and Germany. The economic repercussions since September 11th have served to confirm the diagnosis.

Mr Jospin and his team are pondering how to soften the electoral consequences of a slowing economy (especially since a parliamentary election will come right after the presidential one). Though the national statistics institute estimates the past three months' growth at zero, Mr Fabius avers that he is “almost sure” France will avoid recession—in part, he explains, because the euro's advent has prompted consumers to spend undeclared earnings.

Goodies to come

Mr Jospin had better hope his finance minister is right. In theory, the prime minister has arranged to present the voters with plenty of goodies ahead of the election: for example, lower taxes; a shorter working week—just 35 hours—for employees of small companies (bigger companies have been subject to the 35-hour law since February 2000); increased family benefits for the old or handicapped; even price competition on local telephone calls. Moreover, although the bosses of small businesses are unhappy about the shorter working week, with luck they have been given enough concessions on its implementation to keep them quiet.

The trouble is that the luck seems to be running for Mr Chirac, not Mr Jospin. How, with the economy slowing, can the government pay for all these goodies without ruining its reputation for economic prudence—and without encouraging an appetite for still more goodies? And of what use is the prime minister's famous probity, as against the financial jiggery-pokery that only a year ago led some to call for Mr Chirac's resignation? The voters never cared much. Now they hardly seem to care at all. Since September 11th Mr Chirac has looked truly presidential, while Mr Jospin has looked increasingly beset by the humdrum realities of governing.

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Italy's left

Unimproved, unimpressive

Jan 3rd 2002 | ROME
From The Economist print edition

Italy's left needs an overhaul if it is to take on Silvio Berlusconi and the right

AP

Rutelli and Fassino, with neither in charge

LOSING. That would be best for the Italian left's own sake, said many of its own pundits last spring. And come the general election in May, it duly lost, to a triumphant Silvio Berlusconi and his coalition of the right. Yet the left's expected overhaul has not happened. The government has let in quite a few goals—witness a row over judicial co-operation between Italy and Switzerland, Mr Berlusconi's lack of tact towards Muslim countries, and his embarrassing climbdown last month after he had resisted plans for an EU arrest warrant. But those have all been own goals.

In any event, who is running the opposition? On paper, Mr Berlusconi's leading opponent is Francesco Rutelli, a former mayor of Rome, who performed rather well (though in vain) as the centre-left's candidate for prime minister in the general election. He hates to be called the left's "nominal leader", but he is little more than that. The trouble is that his coalition embraces many small parties, most of which have bosses and agendas of their own.

The biggest figure alongside Mr Rutelli in the opposition is Piero Fassino, the new leader of the ex-communist Democrats of the Left. Mr Fassino will struggle to rejuvenate his party. Since 1996 its tally of votes has dipped from 21% to under 17%; in the early 1980s, it got 30%. Meanwhile, Mr Rutelli's own clutch of parties on the centre-left, known as the Margherita (Daisy), shot up at the last election to win nearly 15% of the votes cast.

One big snag is that nothing much separates the policies of the Daisy and the Democrats of the Left, but they show no sign of wanting to merge. After September 11th, both Mr Fassino and Mr Rutelli backed the government in declaring solidarity with the United States and agreeing to send troops if need be. Both would like to lead a coalition of the left into the next general election, though both have intimated that if Romano Prodi, a former centre-left prime minister, were to come back to Italian politics after his term as president of the European Commission in Brussels, they would let him lead the left against Mr Berlusconi and the right.

But the trouble is that Italy's left has never undergone the sort of transformation that Tony Blair imposed on Britain's Labour Party or Bill Clinton on America's Democrats. In 1990, the mainstream part of the Italian Communist Party changed its name to the Democratic Party of the Left and then again to the Democrats of the Left, but many of its old leaders hung on.

When, after 1992, a series of corruption scandals destroyed Italy's old establishment, which had been centred on the Christian Democrats and the Socialists, some bits of both parties joined up with the reformed Communists. But the left failed to coalesce in any coherent new party likely to be big enough to win or retain power on its own.

What has been happening to the remnants of the old Socialist Party epitomises the left's disarray. Most Socialists are part of Mr Rutelli's Daisy yet are at odds with themselves. One faction, led by a former foreign minister, Gianni De Michelis, went over to join Mr Berlusconi before the election in May. Another, led by a former justice minister, Claudio Martelli, has left Mr Berlusconi and rejoined the left.

The rise of an anti-global movement and the decision of most parties on Italy's centre-left to support America's military retaliation in Afghanistan have further divided the left. The Refounded Communists (a

diehard bit of the old Communist Party), who still get about 5% of the vote, say the future is with anti-American anti-globalists. The Greens, too, who backed Mr Rutelli's clutch of parties in the summer election, have denounced America's action in Afghanistan. Such groups have few seats in parliament but they are catching the mood of many people on the left, especially the young. Messrs Rutelli and Fassino can but sigh.

In a recent trenchant newspaper article, Franco De Benedetti, an independent senator close to the Democrats of the Left, bemoaned this attitude, which, he argued, could keep the left out of power for a very long time. “Do people on the left want to be governed by the left?” he asked. “Or just be cuddled and comforted by having nice feelings?”

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Private education in Central Europe

Less of the state, please

Jan 3rd 2002 | BUDAPEST
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More and more students in ex-communist Europe are paying to be educated

NOBODY likes paying university tuition fees. West Europeans, especially, seem allergic to the idea. But head east, and you see a fast-changing educational landscape, as more and more people shell out their own money to go to private, tuition-financed colleges and universities. In Romania, nearly a third of the students in higher education have gone private: within a year of the country's Communist dictator, Nicolae Ceausescu, being shot in 1989, more than 40 private universities had sprung up. In entrepreneurial Poland, where business schools have boomed, more than a quarter of students at the higher level have gone private. In several other Central European countries, the figure is above 10%, and rising. In most countries of the former Soviet Union, private education has taken off.

Privates on parade

Private higher education institutions in Central and Eastern Europe*

	Number of institutions	Number of students	Typical annual fees, $
Armenia	69	20,000	300
Azerbaijan	17	3,800	500-1,500
Bulgaria	9	27,900	375-570
Czech Rep	8	2,900	1,210-1,340
Estonia	24	13,300	1,640
Hungary†	32	28,000	800-4,800
Latvia	13	14,600	1,050
Lithuania	7	1,300	1,000-2,500
Moldova	39	3,800	155-620
Poland	195	377,700	440-910
Romania	54	130,100	na
Slovakia	2	2,000	800-1,200
Slovenia	9	2,900	2,340-7,020

*Latest estimates †Includes church institutions
Sources: Government ministries and embassies; Soros Foundation

Some countries, however, are still much warier than others. The Czech government agreed to recognise private institutions' degrees only three years ago. Except for Slovenia, the countries that once made up Yugoslavia have been edgy about private higher education. But even there, change is afoot. A year ago Macedonia's parliament voted, just, to approve a private university in the town of Tetovo, where most people are ethnic Albanians. A Dutch former foreign minister who used to oversee minority rights for the Organisation for Security and Co-operation in Europe was so keen on the project, which has given ethnic Albanians across their diaspora a fillip, that it is informally known as “the Max van der Stoel College”.

Even in some of those countries where there are fewer private educational establishments, the ones that do exist have made a big impact. Bulgaria, for instance, has only nine private institutions, but the university at Blagoevgrad, quite near the border with Serbia, has made a name for itself: with a lot of money from the United States, it has sometimes been known in the Balkans as “the CIA university”.

George Soros, an American billionaire financier, began his extraordinarily wide-ranging post-communist philanthropy in Hungary, where he was born. But it still has only half a dozen or so private places of higher learning, as well as some 26 Roman Catholic institutions. But even small numbers are dramatic in countries where the state quite recently ran the entire show. In October, Mr Soros splashed out another $250m towards an endowment at his Central European University in Budapest.

Why has paid tuition taken off? First, state budgets collapsed, state institutions ran out of cash, and many began to ask for tuition fees. Second, far more people, sensing opportunities under capitalism, were suddenly avid for the know-how to push themselves forward. In particular, the burgeoning demand for qualifications in business, the law (especially of the commercial variety), computing and foreign languages started to drive students towards higher education: many seem willing to pay fees equivalent to several years' wages to get the kinds of degrees that will lift them up.

Most private institutions lack the prestige of the state universities, which still keep the cream of the students and teachers. Many teachers in private institutions work only part-time, moonlighting from state jobs. In Ukraine, one professor is said, only half in jest, to have taught at no fewer than 30 private institutes.

But many of the private institutions in Central Europe are improving—and their reputation is rising. For one thing, several have forged links with colleges or universities in Western Europe and the United States, which help them find money and advice on management. That in turn helps allay public doubts about them at home. They also encourage more imaginative teaching, while the state universities tend to stick to the older-style tradition of rote-learning by students expected to regurgitate whatever their teachers tell them.

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Britain and the euro

The myth of eurocreep

Jan 3rd 2002
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The idea that the euro will become a natural part of British life, and membership will somehow become inevitable, is widely held but wrong

Get article background

IT IS the stuff of dreams and nightmares. Where Tony Blair's attempts to make Britain love the euro have fallen on deaf ears, its incarnation as notes and coins will succeed. These will be used not just in the euro area but in Britain. As the British become accustomed to the euro as a cash currency, they will warm to it—paving the way for a yes vote in a referendum.

The idea of eurocreep appeals to both sides of the euro argument. According to the pros, as Britons become familiar with the euro, membership will start to look inevitable, so those in favour are bound to win. According to the antis, as Britons become familiar with the euro, membership will start to look inevitable, so those opposed must mobilise for the fight.

Dream or nightmare, eurocreep envisages the single currency worming its way first into the British economy and then into the affections of voters. British tourists will come back from their European holidays laden with euros, which they will spend not just at airports but in high street shops. So, too, will foreign visitors. As the euro becomes a parallel currency, those who make up the current two-to-one majority against joining will change their minds. From there, it will be a short step to decide to dispense with the pound.

Neil Kinnock, a European commissioner and former leader of the Labour Party, predicts that the euro will soon become Britain's second currency. Hans Eichel, the German finance minister, also says that it will become a parallel currency in countries like Switzerland and Britain. Peter Hain, the Europe minister who is acting as a cheerleader for membership, says that the euro will become “a practical day-to-day reality and that will enable people to make a sensible decision about it”. As many as a third of Britain's biggest retailers, such as Marks and Spencer, have said they will take euros in some of their shops. BP has also announced that it will accept euros at some of its garages.

As many as a third of Britain's biggest retailers say they will take euros in some of their shops

But there is less to this than meets the eye. British tourists can now withdraw money from cashpoints in European holiday destinations, so they are less likely than in the past to end up with excess foreign money. Even if they do, they generally get rid of it at the end of their holidays, says David Southwell, a spokesman for the British Retail Consortium (BRC). The birth of euro-cash will not change that.

True, some will now be able to buy petrol on their return to Britain with euro cash from BP—but at just six garages mainly near ports in the first instance. Even at these outlets, pump prices will continue to be in sterling, as will any change. Marks and Spencer has long exchanged major foreign currencies in its stores. Now it will also accept euros—notes, not coins—at some tills in 30 out of its 302 British stores. But it will not price items in euros as well as sterling since this would require frequent adjustment as the pound fluctuates in value against the euro. Mr Southwell points out that there is nothing new in some stores in tourist locations accepting major foreign currencies. He dismisses the idea of a shopper-led eurocreep, saying “it is as unlikely as dollarcreep”.

“As unlikely as dollarcreep”

For the euro to become a genuine parallel currency, individuals would need to be able to withdraw it readily from cash dispensers. But as William Mason, retail director of the British Bankers' Association (BBA) points out, ATMS generally operate in one currency. Even in Northern Ireland, which shares a land border with the euro area, there are only six special dual-currency ATMS, according to Colm McKenna of the Bank of Ireland. And Canada's experience shows that a dominant currency next door doesn't necessarily undermine local money: the Canadians show no sign of abandoning their dollar.

As the statistics reeled out about E-day reveal—notes that would stretch to the moon and beyond, coins many times the weight of the Eiffel Tower—the changeover of a national currency is a logistical challenge of the first order. In Britain it will require two billion notes and around 14 billion coins. It will require major investments by the retailing and banking sectors. According to the BRC, the cost to retailers will be between £1.9 billion ($2.7 billion) and £4 billion. The BBA estimates that the cost to the banking sector will be a billion pounds.

It also takes time. Simply minting the coins will take up to 30 months. According to the government's own changeover strategy, it will take 24-30 months from a yes vote in a referendum before notes and coin could be introduced. Big retailers and banks would like up to three years.

No one in the private sector will undertake these investments until the government has made its mind up, campaigned for entry, overturned the two-to-one majority against entry and won a referendum. Since there is no natural enthusiasm for entry, Mr Blair will have to make the case on economic grounds. That will be hard. For the second year running Britain's economy is set to do better than the rest of the euro-area. Nor does the euro's performance as a currency make Mr Blair's job any easier. The pound will most likely have to fall if Britain is to join the euro at a competitive exchange rate. But if sterling is seen to weaken as a result of a push for euro membership, this will probably harden opposition to it.

Overturning British opposition to the euro is a difficult job, and it is one that Mr Blair will have to do himself. Eurocreep will not do it for him.

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Highlands and Islands

Go north, young man

Jan 3rd 2002 | ISLE OF SKYE
From The Economist print edition

The English are invading the Highlands of Scotland, again

WHEN Andy Butler, a manager in the engineering industry, was told to shut down a small factory and fire everyone, he decided he had had enough. On holiday soon after on the Scottish island of Skye, he visited a run-down country house hotel. “No staff were on duty and there were no guests,” he says. But it was a beautiful location, an idyllic summer's day and, of course, he bought it. So the Butler family became part of a phenomenon invigorating the Highland economy—English immigrants.

The Scots have been moving out of the Highlands for a long, long time, pushing the region's population down to a low point of 320,000 in 1961. Since then it has risen to about 373,000. In the most popular parts, the growth rate has been far sharper. The population of Skye and Lochalsh is reckoned to have grown by 20% over the past decade, making it one of the fastest growing districts in Britain. Officials of Highlands and Islands Enterprise (HIE), the regional economic development agency, guess that just over half are coming from England.

The 18th- and 19th-century English invaders were mostly rich people who cleared the peasants off vast tracts of land they ran as private playgrounds. The interests of local people, apart from those needed to work the estate, came a poor fifth after hunting, shooting, fishing, and sheep farming.

The 20th-century invaders are a different bunch, with a correspondingly different effect on the local economy. Mr Butler employs 60 local people at peak times and now turns over £1m a year. He reckons he has spent about £1m on renovations since he came in 1990—especially of an adjacent cottage which was the home of Flora MacDonald, the Jacobite heroine rescuer of Bonnie Prince Charlie after his Battle of Culloden defeat in 1746, and on buying nearby buildings for an activity holiday centre.

Lifestyle and scenery appear to be what most attract the migrants, who can bring two things into the local economy. First, after buying a Highland home, the English usually have capital left over from the sale of more expensive property south of the border which can provide an income to supplement relatively meagre takings from a bed-and-breakfast or a hobby-style arts and crafts business.

This way of living can keep open a rural shop whose takings would not otherwise sustain a family. That's partly how Andy and Viv Oliver manage. They moved from Durham, where they worked at the university, to run the shop and post office on the tiny island of Gigha, off the Mull of Kintyre, in 2000. As Gigha has only 110 people, the business does not provide much income, so they run a small guest house as well. It keeps them busy seven days a week in the summer. “It's hard work,” says Mrs Oliver, whose asthma condition has much benefited from the move, “but we live somewhere beautiful.”

Second, the incomers often bring useful skills. After 14 years working for Marks and Spencer, latterly as a store manager, Muriel Jones moved from Yorkshire with her husband in 1995 to take over the village shop at Balmacara, a few miles from the Skye bridge. She says she has tripled the shop's takings, mainly by paying close attention to what customers want and supplying their needs immediately rather than after a day or so, which tends to be the Highland way. She has 14 staff, who are all kitted out with the shop's maroon uniform. So impressed with her business acumen were the locals, that they twisted her arm to chair the Skye and Lochalsh enterprise company.

After several years holidaying in Skye, Antony and Cheryl Shepherd decided that they wanted to live there rather than in their native Birmingham. Mr Shepherd, a jeweller, spotted that, apart from a craft silversmith, there was no jewellery business on the island. Eight years after starting in a shed next to the Co-op in Broadford, they now have a workshop and showroom that would not look out of place in Bond Street. They have also created 10 jobs.

Partly thanks to the immigrants, the local economy is doing reasonably well. Only 3.5% of the region's workforce claims unemployment benefit—below the overall Scottish rate.

There are grumbles about immigrants pushing up property prices, but little local antagonism to this new wave of English. After a century of decline, the Highlands need all the growth they can get.

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Railways

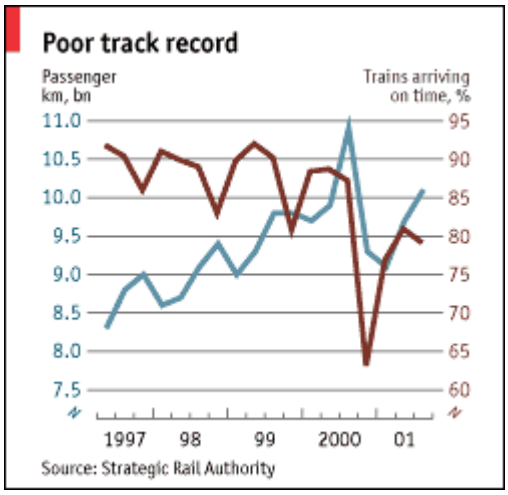
That's enough passengers

Jan 3rd 2002
From The Economist print edition

Booming rail travel is exacerbating the railways' problems. Strange, but true

MORE passengers are travelling by rail than at any time since the infamous Dr Beeching took an axe to the network in the 1960s. Yet the railways are reported to be in a state of terminal crisis. According to one national newspaper, the national network is on the brink of closure. What's up?

The performance of the train operating companies (TOCS) has deteriorated, especially since a fatal crash at Hatfield in October 2000 (see chart). This is because worries about the state of the track have led to speed limits and more maintenance work. Despite this, traffic is once again growing fast, thanks to a combination of shrewd marketing, cut-price fares and road congestion. The Association of Train Operating Companies, which reported that more than 81m passenger journeys were made in the four weeks to December 7th, says that growth is as fast as it was before the Hatfield crash. Since privatisation five years ago, passenger numbers have increased by 20% and distance travelled by nearly 30%.



So why is there so much talk of a catastrophic breakdown of the network? Partly because senior Railtrack managers, demoralised by the mess the government made when it put their company into administration three months ago, have been giving vent to their discontent. John Curley, manager of Railtrack's western zone, says that 10% of the track is “at or beyond the end of its physical life” and that a further 30% will need replacing within five years. Much of it, he says, should have been replaced years ago. Michael Holden, director of Railtrack's southern zone, says the network is suffering “the worst level of punctuality” that he has known in his 20-year career.

There is no contradiction in the idea that Railtrack is failing while the TOCs succeed: indeed, senior rail managers argue that there is a causal relationship. The big increase in services since privatisation has so overstretched the network, they say, that it is now a prime cause of delays. Aidan Nelson, standards director of the Railway Inspectorate, the national rail safety body, said recently that it was imperative that no more train services were added until maintenance had improved.

Behind the success of the TOCs and the failure of Railtrack was a silly incentive structure put in place when the railways were privatised. TOCs bear none of the costs of increasing traffic, while Railtrack sees none of the benefits. This has not changed; and the government's plans demand that the boom in traffic continue. Its transport white paper envisages a 50% increase in rail passengers and an 80% increase in freight within 10 years. The Strategic Rail Authority, the government body that runs the railways, is due to publish its plan for the industry on January 14th: it should address the question of whether these targets are still realistic.

Aside from capacity and reliability, the third factor that the government has to get right is safety. Contrary to popular prejudice, the railways are safer than they were prior to privatisation, and safety is still improving. Over the past year, signals passed at danger have decreased by 20% and the number of broken rails has gone down by 13%. But there tends to be a big rail crash about once every 18 months. The crash at Hatfield, which killed four and disrupted the network, was 15 months ago.

If something bad does happen soon, it will surprise nobody, least of all the politicians. They have become fatalistic about the railways. As one source close to ministers admitted: “This is one argument we can't

win.”

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Clubbing in London

Blackballed

Jan 3rd 2002
From The Economist print edition

Gentlemen's clubs are better material for anthropologists than for politicians

THEY may seem centuries apart, but the sedate London gentlemen's clubs of St James's and the nightclubs that populate the neighbourhood to the north have a lot in common. Within both types there are subtle but meaningful variations: the nightclubs accommodate varying musical and sexual tastes, while a gentleman's club conveys, to the *cognoscenti*, important information about his social and intellectual status. As a general rule, the more exclusive clubs of both species are, the more desirable entry to them becomes.

But not, it seems, for Iain Duncan Smith, the new and (until now) largely anonymous leader of the Conservative Party. Like every Tory leader since 1832, Mr Duncan Smith has been offered membership of the Carlton club, which was founded in that year under the patronage of the Duke of Wellington by opponents of the Reform Bill. But Mr Duncan Smith has decided that the Carlton is a little too exclusive: women cannot be full members, and since this is just the sort of sex discrimination that the Tories are now against, he won't be joining. (Confusingly, he remains a member of the equally chauvinist Beefsteak club, where all the waiters are addressed as “Charles”.)

In fairness to the Carlton, even grander clubs—such as Boodle's, which women have to enter through a side door—are even more discriminatory (as indeed is the Garrick, whose left-leaning members still prefer not to practise what they preach). Many of the clubs that have embraced women have done so out of economic necessity rather than feminist zeal. But these harmlessly antiquated institutions, with their time-warped interiors and mediocre food, ought not to concern feminists. They arouse controversy only because the few women miffed at being kept out elevate their grievances to the status of politics.

So Mr Duncan Smith might have done better to swallow his flexible principles and join. By making his stand against the forces of conservatism, he has introduced himself to the many voters who hitherto may not have heard of him as the sort of man who joins gentlemen's clubs—a characteristic likely to lose him more votes than his dubious feminism will gain.

Still, it could have been worse. The last Tory leader tried to suggest that he was hip and cosmopolitan by attending the Notting Hill carnival and wearing a baseball cap—an accessory that will be laughingly remembered long after any of his policies. In the politics of clubbing, Mr Duncan Smith might have struck out from the crusty clubland of St James's to join one of London's trendier clubs, such as the Groucho or Soho House. Worse still, he might have taken a turn at the Ministry of Sound. He has at least learned that if there's one thing less appealing than an old buffer, it's a buffer with trendy pretensions.

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The myth-makers

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Over the past century, physicists have been weaving a cosmic creation-myth from theories about the smallest and the largest objects in the universe. It might even be true, writes Geoffrey Carr

IN 1900 physicists were feeling pretty smug. Many of them thought they had the universe taped. The majestic clockwork wound up by Isaac Newton was running exactly as predicted. Subsequent discoveries in fields as diverse as heat, light and electricity all seemed to fit into the grand scheme of things. New telescopes were mapping the heavens and revealing that the earth and its sun were part of a huge but measurable star system, the Milky Way, that seemed to encompass the whole universe. Exactly what an atom was remained to be determined, and there were a few puzzling discoveries, such as cathode rays and radioactivity. But these could surely be fitted in. Basically, it was just a matter of dotting the “i”s and crossing the “t”s.

A few years later, it was all over. People realised that far from knowing everything, they knew almost nothing. Two hypotheses, quantum theory and relativity, and two discoveries, the atomic nucleus and the fact that the Milky Way was not alone, but was one of a zillion similar galaxies, did not merely upset the apple cart, they scattered its contents right over the road. It has taken a century to pick the apples up and order them neatly again.

The result is impressive. Quantum theory, first proposed by Max Planck in 1900, has been elaborated into a comprehensive description of the very small. It is riddled with weirdness, mostly the result of Werner Heisenberg's famous uncertainty principle (namely, that it is impossible to be sure, at the same time, where an object is and how fast it is travelling). But it provides an accurate description of the way things are, down to the smallest objects that machines can measure. At the other end of the scale, Albert Einstein's theories of relativity (the special theory, proposed in 1905, and the general theory, proposed in 1916), describe the way things are up to the largest objects that machines can measure.

Using these theories and those machines, physicists have discovered many of the fundamental particles of which the universe is made, the forces that hold them together, and how those particles and forces interact to produce a bestiary of other objects—atomic nuclei and galaxies included—that were unknown in 1900. A coherent picture of sub-atomic physics, known as the Standard Model, has been painstakingly put together, and almost all the observations seem to fit into it. Similarly, a coherent picture of the universe, known as the Big Bang cosmology, has emerged. Again, almost all the observations seem to fit.

This time no one is feeling smug

This time, though, no one is feeling smug. For one thing, good as quantum theory and relativity are at explaining things, neither can be explained in terms of the other. Like parallel lines, they never meet. Nor, even in its own terms, is either of them a “theory of everything”. At one level, both explain the universe very well indeed. At another, they explain nothing—for although they give a good description of the way things are, they are silent about why they are that way.

Moreover, there is that weasel phrase “almost all the observations seem to fit”. As with cathode rays and radioactivity a century ago, some false notes are emerging. And there are a few dissenters, especially on the cosmological side, who doubt that some of the observations are actually good enough to support the theories built on them. With luck, new machines that are now coming into service, or will do so soon, will be able to address these problems. These machines will gather more and better data to quell the dissidents (or maybe prove them right) and to help to decide between the competing theories which try to embrace those observations that do not currently fit.

The next decade or so is likely to be a battleground between those theories. There are many ideas around, some extremely strange by everyday standards, and not all of them easily testable. What these ideas represent is the latest chapter in the construction of a modern creation-myth. For, unlike most branches of science, fundamental physics—the study of the very small and the very large—is not undertaken in the hope of tangible benefit. It is done to answer the question “Why?” In some ways, therefore, it resembles a branch of theology.

Like the theologies of earlier days it demands huge temples for its worship. These temples are not cathedrals and mosques, but telescopes and particle accelerators. Their guardians—the successors of Newton, Planck, Einstein and myriad others, less famous in the wider world—are sometimes, jokingly, referred to as the priests of science. But the joke has a hard edge to it. In some senses they do have a priestly role. For they are the creators of the real story of creation: the modern myth-makers.

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The Big Bang burger bar

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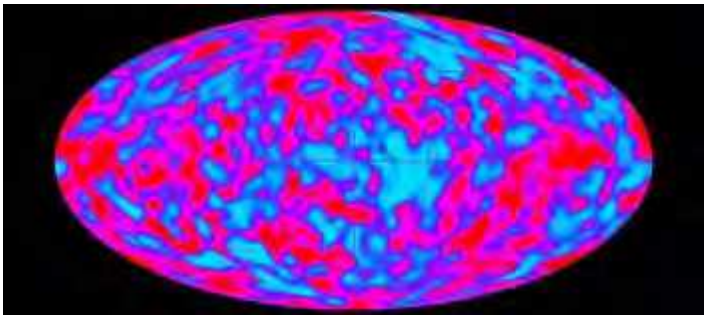
The universe started small, but then got very, very large

THE Judeo-Christian creation myth begins with a void—that is, with empty space. The modern theory does not even go that far. According to the version of that theory put forward by Andrei Linde of Stanford University and Alexander Vilenkin of Tufts, it begins with nothing whatsoever, not even space itself. That is a difficult idea to grasp, made even more difficult by the fact that it requires the sum total of the stuff in the universe to be nothing as well. Obviously this raises a problem, since observation suggests that the universe does actually contain things. But the problem is not insuperable.



The universe according to COBE

There is one equation in physics that almost everyone has heard of. It is $E=mc^2$. The “E” stands for energy, the “m” for mass and the “c” for the speed of light. This equation emerged, somewhat unexpectedly, from Einstein's special theory of relativity. It shows that mass and energy are interchangeable—in other words, they are different aspects of the same phenomenon. They are also, as the general theory of relativity showed, both affected by gravity (the general theory is mainly a theory of gravity; one early test of it was the observation that starlight passing close to the sun, and observed during a total eclipse, is bent by the sun's gravitational field). Because everything is attracted to everything else by gravity, that gravity is acting, in effect, as negative energy. Add together the negative gravitational energy in the universe and the positive energy (including all the mass around), and the result is zero. Or so Dr Linde and Dr Vilenkin assert. And observations of the amount and distribution of stuff in the universe do not contradict them.

Given that the universe actually consists of nothing at all, explaining its existence becomes rather easier. The separation of the nothing into energy and gravity is a result of the uncertainty principle. One of the phenomena predicted by this principle is called quantum tunnelling. In pre-quantum physics, an object confined by a barrier stayed confined. However, the uncertainty principle means that the object's position is actually indeterminate. It may sometimes, therefore, find itself on the other side of the barrier. In effect, it has tunnelled its way through. (This odd observation is well established experimentally, and is exploited commercially in electronics.) The barrier need not be physical; it can be energetic—such as going from nothing to a mixture of positive and negative energy. The Linde-Vilenkin model is based on the idea that the universe simply quantum-tunnelled its way into existence.

Such quantum cosmology really is mythological, at least at the moment. No one knows how to test it. Also, the universe that results from quantum tunnelling is small and dull, whereas the actual universe is huge and interesting. How it got that way was, until recently, also the realm of untested theory. But in the past few years that theory has been tested and found reasonably fit.

Inflation is good for you

That the universe is expanding was discovered in the 1920s by Edwin Hubble, after whom the Hubble Space Telescope is named. The term “Big Bang”, to describe the theory that this expansion meant that the universe could be traced back to a tiny beginning, was invented in the 1940s. But it took until 1980 for people to realise just how big the bang was. That was when Alan Guth, of the Massachusetts Institute of Technology, came up with the idea of inflation: namely that when the universe was very, very young it not merely expanded, but grew so fast that there are scarcely words to describe the process.

“Very, very young” means within a trillionth of a trillionth of a trillionth of a second of the universe's coming into existence. “Scarcely words to describe this process” means that within that time it grew from something the size of a subatomic particle to something the size of a grapefruit. This may not sound much, but it means a million trillion trillion trillion trillion trillion trillion trillion-fold increase in volume in that trillionth of a trillionth of a trillionth of a second.

To account for this process, Dr Guth invokes a new force of nature. In the familiar circumstances of the modern universe, gravity acts only as an attractive force, but an unexpected consequence of the general theory of relativity is that there are circumstances when it can act as a repulsive force as well. Probably, Dr Guth's new force is a manifestation of this idea: in its earliest existence, the universe was actually pushed apart by its own gravitational field.

The universe's expansion since then has been positively sedate. The galaxies are currently estimated to be flying apart at 70km per second per megaparsec of distance separating them (a parsec is 3.3 light years; for historical reasons, astronomers prefer to state distances in them). But an early period of inflation, though it cannot be observed directly, would solve a number of cosmological puzzles.

The first puzzle is that the universe is uniform. Of course, it is full of grit—planets, stars, galaxies and so on—but this grit has the same sort of distribution everywhere. That suggests the early universe was well mixed. But there are places in the universe so far apart that light would not have had time to travel between them since the beginning. As nothing can travel though space faster than light does (relativity, again), these places could have had no contact of any sort with each other, ever. They are over each other's horizons, so no mixing between them could account for the similarity of their appearance.

A second puzzle is that space seems to be flat. By this, cosmologists mean that parallel beams of light (ie, parallel lines) will neither cross nor diverge, however far they travel. This is flatness as Euclid understood it, even though it is not confined to a plane. But there seems no special reason why space should be flat. Other types of geometry, in which parallel lines do cross, can easily be constructed (lines of longitude on a globe are parallel, but they meet at the poles). It takes only a little more mathematical imagination to find ways to make parallel lines diverge.

The third puzzle is, in a sense, the converse of the first: where does the “grit” come from? Stars, galaxies and so on are formed by gravity sucking in matter from surrounding areas of space. But that requires an initial concentration of matter to act as the gravitational “seed” for the suction. Without such seeds, the universe would be filled with a uniform, and rather rarefied, gas. Until Dr Guth came along, no one could see how big enough concentrations could be built in at the beginning to account for the amount of grit seen today.

Inflation resolves these three puzzles. The horizon problem goes because the different parts of the universe were indeed once in close contact. They could separate at massively more than the speed of light because they were not actually travelling through space. It was space itself that was expanding—and that expansion is not constrained by relativity.

The flatness problem disappears because regardless of its initial geometry, a big enough expansion would force space to be flat (or at least so close to being flat that you could not measure the difference). Think of the surface of a balloon. As the balloon is inflated, the curvature of the surface diminishes. If you could inflate a balloon to be the size of the earth, it would look just as flat from any point on its surface as the earth did to primitive people. The universe is much bigger than the earth, and so looks much flatter.

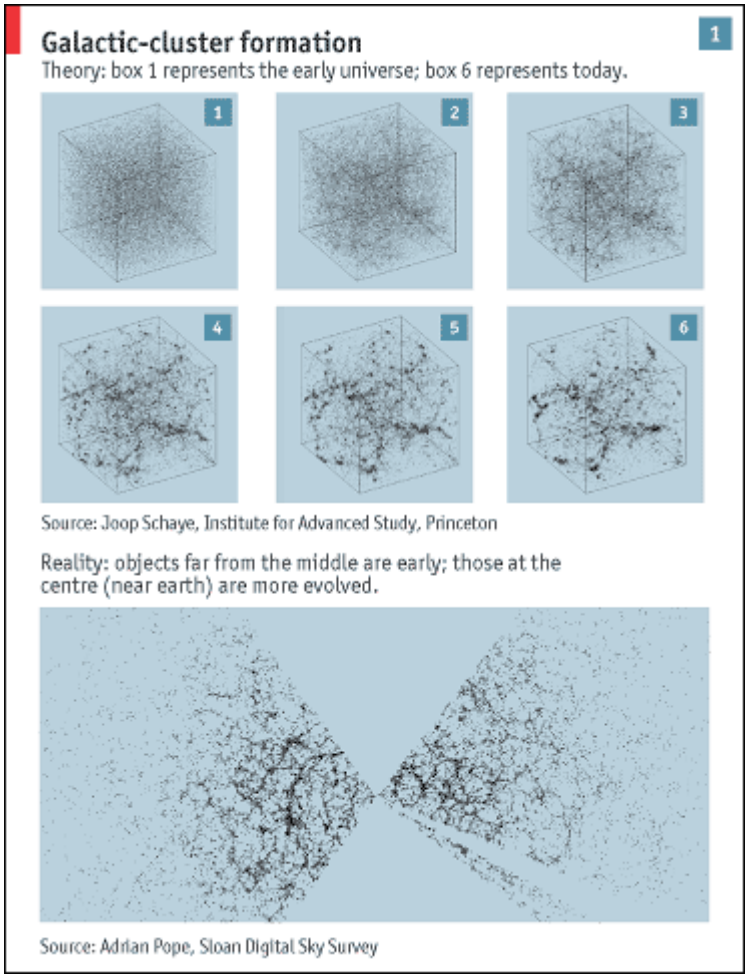
The solution to the density-fluctuation problem is more subtle, and goes back to quantum theory. Just after the universe first tunnelled its way into existence, it was small enough for the uncertainty principle to produce a continually shifting pattern of density fluctuations within it. If it had expanded from the beginning at a mere 70kps per megaparsec, such anomalies would have remained tiny as it grew. A period of massive inflation, though, would blow them up to vast dimensions, taking them out of the quantum realm and “freezing” them into permanency.

It is a nice idea. But in science nice ideas are not enough. They have to be tested and shown to be right. Surprisingly, inflation can be tested, and it does look right.

The tests depend on minute fluctuations in something called the cosmic microwave background (CMB). In the electromagnetic spectrum, microwave radiation lies between radio waves and infra-red light. The universe is full of it. The discovery of the CMB, made in the 1960s, was the second piece of evidence for the Big Bang after Hubble's finding that the universe is expanding. The CMB is, in fact, radiation left over from the bang itself. It thus carries an imprint of the early universe, including any “frozen” quantum fluctuations.

In 1992, an American satellite called COBE (Cosmic Background Explorer) managed to make a map of the fluctuations in the CMB. Crude though this map was, it showed that fluctuations existed, and could have formed the nuclei for the grit. Further analysis of COBE data, together with information gathered by balloons, has examined the flatness question. This, too, has been resolved in favour of inflation. That was possible because the CMB is actually a picture not of the bang itself, but of the universe when it was 300,000 years old. Before that, the radiation was travelling through gas, and this gas was resonating with sound—literally echoes from the Big Bang. It is possible to calculate the resonant frequencies, and how the changes in the density of the gas that they caused would refract the CMB. The effect would be to impose a particular pattern of sizes on the fluctuations in the radiation.

If space is flat, the microwave picture of that pattern will pass through it undistorted. If it is curved, the pattern will be altered in predictable ways. The measurements suggest it is undistorted, though a new satellite with the contrived name of MAP (Microwave Anisotropy Probe) is currently engaged in a more refined cartography of the heavens (see article).



Once the fluctuations were frozen, the rest was pre-ordained. The gravity of the ripples pulled in gas to form small clusters of supermassive stars. These merged to form galaxies which, in turn, grouped together to form clusters and, ultimately, superclusters. The trailing structures and voids that emerge from computer models of this process look pleasingly similar to the reality shown by the Sloan Digital Sky Survey (see diagram above). Meanwhile, when galaxies have formed, ordinary-sized stars with accompanying planets emerge within them as gravitational anomalies on smaller and smaller scales create smaller and smaller objects.

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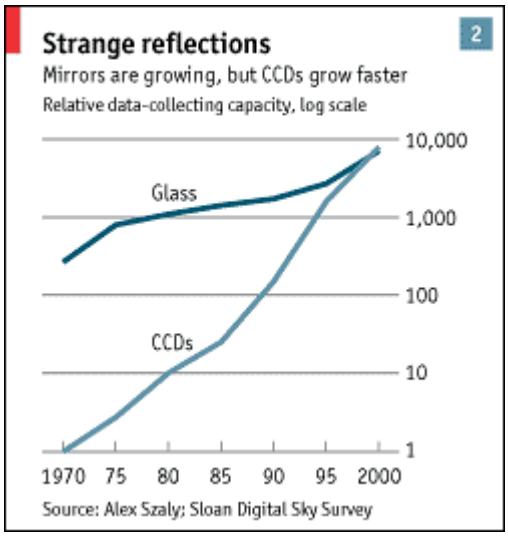
New enlightenment

Jan 3rd 2002
From The Economist print edition

Telescopes are getting bigger, better and less tangible

ASTRONOMY has undergone a revolution over the past few decades. The more obvious part of this revolution has been caused by the introduction of telescopes that use mirrors of previously unthinkable dimensions to collect light. Several, such as the two Keck telescopes on the peak of Mauna Kea, in Hawaii, have (or will have) mirrors that are ten metres across. The bigger the mirror, the easier it is to see faint (ie, distant) objects.



Less obvious, but more profound, is the replacement of photographic film by charge-coupled devices (CCDs) as the preferred way of detecting the light that is collected. Film gets saturated, so the real difference in magnitude between bright and faint objects is lost. CCDs (the detection elements used in video and digital cameras) capture every photon. Telescope area is doubling every 25 years. The number of CCD"pixels" is doubling every two years.

Telescopes are gregarious instruments. They need special conditions (an absence of city lights; reliably clear skies; and still air, to reduce twinkling). Where one settles, others often follow. At the moment, the most fashionable places on earth for telescopes to hang out are the Atacama desert of northern Chile, and Mauna Kea. Being in opposite hemispheres, these two sites allow the whole sky to be observed. For a telescope called Gemini, that advantage has been exploited by building identical instruments (with eight-metre mirrors) in both places.

Such toys are not cheap. Gemini cost $184m; the Kecks were more than $140m. However, the Kecks, and many others, are paid for not by taxpayers but by rich individuals or charitable foundations. This tradition goes back at least as far as the Yerkes Observatory in Wisconsin (the best in the world, a century ago), which was paid for by the builder of the Chicago elevated railway.

The best place of all to put a telescope for observing outer space, though, is outer space itself. Increasingly, earthbound observations are being backed up by satellite telescopes of various kinds.

The best-known is probably the **Hubble Space Telescope**, which operates at optical frequencies. X-rays are served by **Chandra**, an American satellite, and XMM, a European one. Cosmic gamma rays, which are even more energetic, have been invisible to science since the **Compton Gamma-Ray Observatory** was "deorbited" in June 2000. But June 2001 saw the launch of what is, cosmologically, the most important telescope in orbit now: the **Microwave Anisotropy Probe** (MAP), which will examine the cosmic microwave background.

MAP's predecessor, COBE, was a relatively crude instrument. It could map the kinks in the background with an accuracy of only 7° of arc; MAP should manage 0.2°. The detailed geography of the early universe, including the layout of the ripples suspected of seeding the formation of galactic superclusters, will thus be laid bare when MAP reports later this year.

Mapping the modern distribution of these superclusters is one of the tasks of the **Sloan Digital Sky Survey** (another foundation-funded instrument, based in New Mexico), which is scanning a quarter of the sky in unprecedented detail. It should pinpoint the positions of 1m galaxies, and has already produced a map of their local distribution (see the diagram at the end of the previous article).

The database produced by the Sloan survey will form one element of the so-called Virtual Observatory.

When this is complete, it will link the Sloan's database with those of Hubble, Chandra and several other sky surveys now being conducted. Soon astronomers may no longer need to look at the sky at all. They will have an unbeatable representation of the universe a mere mouse-click away.

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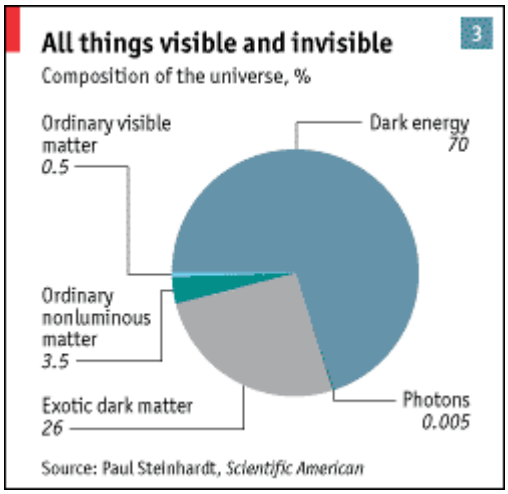
Dark for dark business

Jan 3rd 2002
From The Economist print edition

There is more to the universe than meets the eye



LOOK into the night sky with a telescope, and points of light will fill the field. But one of the oddest things about the universe is that what you see is definitely not what you get. The stuff that is visible through telescopes (including those that see in frequencies other than visible light) amounts to only about 0.5% of the total amount of stuff out there. The rest is dark.

That is not necessarily surprising. What is surprising is that almost all of the dark stuff is stuff that could never be visible. It is completely different from the matter that makes up atoms.

That there is something missing from the picture was first suspected by Fritz Zwicky. He was a contemporary of Hubble's who studied the rotation and clustering of galaxies. Zwicky found that galaxies rotate oddly. Instead of the central stars moving faster than the outer ones, as simple physics would predict, all move in tandem. Galactic discs, though made of widely separated objects, behave almost as if they were solid. Moreover, galactic clusters do not appear to have enough mass in them to stop themselves flying apart. Even allowing for gas and dust that do not shine, and so-called MACHOs (massive compact halo objects, a fancy name for stars too feeble to see), galaxies need to be a lot heavier than they look to explain this. The extra mass would form a spherical halo around the disc, holding it together gravitationally, and attracting other galaxies, holding clusters together.

Another reason for believing the universe is heavier than it looks is cosmological. The universe's expansion rate is set by a battle between the kinetic energy (energy of motion) that is causing it to grow, and the gravitational attraction of its parts that is trying to pull it back together again.

If the kinetic energy and gravitational attraction exactly balanced, the universe would contain exactly enough matter to slow its expansion without ever bringing it to a complete halt. This is known as the critical density. The ratio of the actual density to this critical density is a number that is referred to as *omega*. A bit less matter than the critical density, and the universe would fly apart in an accelerating expansion. A bit more, and it would decelerate and collapse in on itself.

There are two reasons to think that the actual density does equal the critical density (ie, *omega*=1). The first is this: if it began that way, it would have remained that way, but if it did not, the feedback processes involved in acceleration or deceleration would drive it rapidly to zero or infinity. Rapidly, in this context, means within a few billion years—certainly less than the age of the universe.

The second reason to believe *omega*=1 is that space is flat. That, according to the prevailing view, is because of inflation. But just as the geometry of an inflating balloon is controlled by the properties of the gas that is causing the expansion and the rubber that is resisting it, so the geometry of space is controlled by the stuff within it. The linchpin of general relativity is that matter and energy warp space. The kinetic energy and the gravitational attraction warp it in different directions. When *omega*=1, they balance, and space is flat.

However, adding up all of the visible and invisible atomic matter in the universe (stars, gas, MACHOs and so on) gives a value for *omega* of about 0.04: neither zero, nor one, nor infinity. This is a real headache. For *omega* truly to have a value of 0.04, it must have started out so close to one without actually being one (within one part in a billion billion of one) that it is easier to believe it actually was and is one, and that the measurements are wrong.

Something is therefore missing. The answer, it seems, is to abandon what Sir Martin Rees, Britain's Astronomer Royal, has dubbed “particle chauvinism”, and admit that the stuff of stars, planets and people is merely the scum of the universe. The reality is something else, and the dominant form of matter in the universe is probably made of particles called WIMPS.

Weakly interacting massive particles, to give their full name, would form a shadow world. The phrase “weakly interacting” has a specific meaning: it refers to the fundamental force by which these particles perceive other matter.

All present-day physics is believed to be governed by four forces. Two, gravity and electromagnetism, are familiar from everyday experience. The other two, the weak and strong nuclear forces, are not. The strong nuclear force holds atomic nuclei together. The weak force, as its name suggests, does not do much at all. Its only commonplace effect is that it controls the rates of certain sorts of radioactive decay.

All matter feels the force of gravity, but only particles called quarks feel all three of the other forces. Those that feel only gravity and the weak nuclear force are pretty antisocial. They rarely interact with others. That makes them hard to detect.

One class of purely weakly interacting particle, the neutrino, is well known. But even it requires special equipment buried underground for any useful studies to be done (see box with next chapter). Similar buried equipment is looking for WIMPS (neutrinos do not weigh enough to be WIMPS), but it is hard to find something when you don't know what you are looking for. However, many particle physicists believe that their subject, too, would make more sense if there were WIMPS around. Indeed, they hope to come across some in their machines over the next few years. So there is a reasonable hope that light will, so to speak, soon be shed on the dark-matter problem. But only up to a point. For although the WIMPS (or whatever they turn out to be) provide enough extra mass to account for the dark matter inferred gravitationally by Zwicky and his successors, they only push the value of *omega* up to about 0.3. Two-thirds of the universe is still missing from the balance sheet.

Sometimes, answers come when someone is asking a different question. In the early 1990s, there was a problem with the age of the universe. At 12 billion years, it seemed to be younger than some of the stars within it, which looked as much as 15 billion years old.

The age of the universe is worked out from its rate of expansion, which in turn is calculated from two things: the speed at which galaxies are receding, and the distance to those galaxies. Measuring the speed is easy. Hubble used the method, which is to determine the “red shift” of the light they emit. Red shifting is caused by the Doppler effect. This compresses light waves from an approaching object, making them appear bluer, and stretches those from a receding object, making them appear redder. The redder the light, the faster the recession. (Doppler originally described the same effect for sound waves; it explains why the pitch of a police car's siren changes as it passes by.)

The difficulty is measuring the distance to a galaxy. This relies on objects known as standard candles, in other words things whose absolute brightness is known for some reason, and whose distance can thus be calculated from their dimness. Hubble used variable stars called cepheids, whose period is related to their absolute brightness. But cepheids, even though they are bright by stellar standards, can only be made out in nearby galaxies. For this and other reasons, Hubble initially underestimated the age by a factor of ten.

To solve the problem, a new standard candle was sought. Two groups of astronomers, one involving Robert Kirschner of Harvard University, and the other led by Saul Perlmutter of Lawrence Berkeley National Laboratory in California, hit on the idea of using a sort of exploding star called a type 1a supernova. This is a binary star in which one member is sucking matter from the other. When the first star reaches a particular critical mass, it blows up. That means the size and brightness of the explosion is more or less the same in every type 1a supernova.

Darker still

When the researchers started looking at their results, they found something odd. Contrary to expectations (and, indeed, to the idea that *omega* does actually equal one), the universe's expansion is speeding up. That solved the age problem. It meant that things were further away (so, because of the time that light takes to arrive from them, older) than had previously been thought. The universe is now officially 13.5 billion years old (and the oldest stars have conveniently been recalibrated at 11.5 billion

years). However, all this threatened to replace one mystery with another.

Fortunately, the *omega*=1 hypothesis does not need to be abandoned. Space really is flat, and the stuff in the universe really is at the critical density. In retrospect, the discovery of an accelerating expansion seems to be the last piece in the jigsaw. The expansion suggests that the missing two-thirds of the universe is a form of energy that, while balancing the sums, and keeping space flat, actively pushes things apart.

Two explanations for this so-called dark energy (whose strength is represented by another Greek letter, *lambda*) are being floated. One is that it is a pale imitation of the force that caused inflation: a form of repulsive gravity. Einstein referred to this as the cosmological constant. The matter required to produce this repulsive gravity would be provided by yet another consequence of the uncertainty principle, which is that empty space is not, in fact, empty.

If entire universes can appear as quantum fluctuations, mere sub-atomic particles should have no difficulty doing so. Indeed, it happens all the time. Pairs consisting of a particle and its matching antimatter antiparticle pop out of the vacuum for infinitesimal periods before annihilating each other and popping back in again. Though these “virtual” particles have such a transient existence, their effects can be detected experimentally, so there is no doubt that they exist. They would also exist in the right circumstances to provide a repulsive gravitational force of the sort Einstein predicted. Unfortunately, calculations suggest that the force produced (ie, the value of *lambda*) would be way too high.

The other possibility is that the dark energy is something completely new. This is another way of saying that no one has a clue what it might be. Nevertheless, to give this unknown new stuff a label, Paul Steinhardt, of Princeton University, has dubbed it “quintessence”. As with inflation, a name is a start. Watch this space, whatever might be filling it.

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Model behaviour

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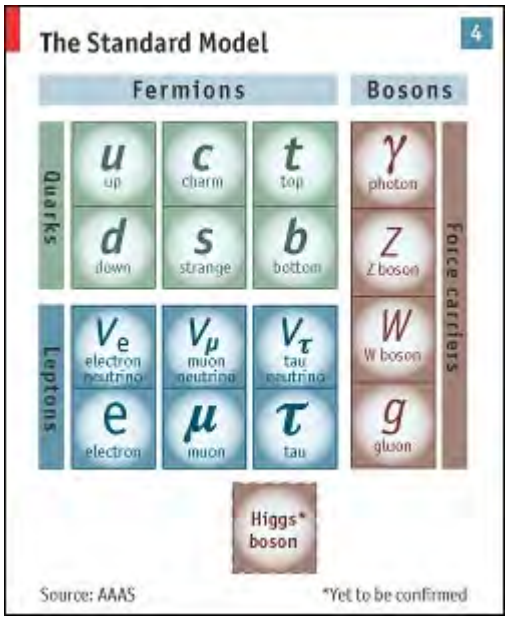
Particle physics makes sense, but it assumes too much

VISIBLE, invisible or just plain quintessential, the composition of matter and energy needs to be explained. The fundamental particles of which the universe is now composed are believed to have appeared very early on—within ten microseconds (millionths of a second) of the end of inflation. Before that, the mix was different. And the further you go back into those first instants, the more different it was.

The reason for these differences is that the universe in its early moments was far hotter than it is now (all its energy was concentrated into a much smaller space). As it cooled, the stuff in it changed state. Some people compare this to a gas cooling. First it becomes a liquid, then a solid. A better analogy might be the cooling of magma under the earth. It starts off as a uniform mixture of liquid rock, but as the temperature drops, minerals start to form one after another as their freezing points are reached. Each time another type of mineral crystallises, the composition of the mixture changes. Eventually, no liquid remains, and you are left with granite. The mix of subatomic particles that make up the modern universe is like a species of cosmic granite.

Physicists believe that if they can find out what the cosmic magma looked like, they will understand the essence of the universe. Knowing its original composition and knowing why it crystallised the way it did is to know the basic laws of physics. At the moment, physicists are some distance from such a "theory of everything" (though Stephen Hawking, a well-known cosmologist who works at Cambridge University, has a bet that it will be found within 20 years). In the meantime, they make do with an interim solution called the Standard Model.

The Standard Model explains both everything and nothing. Ask a physicist, and he will probably tell you that it consists of 17 irreducible point-like particles (16 of which have been detected and one of which remains elusive), together with three forces.



Alas, things are not quite that simple. Four of the particles are the physical manifestations of the forces. Two of the three forces are actually different manifestations of the same underlying phenomenon. A fourth force has no known physical manifestation, and cannot be integrated with the model. And the 17th, as yet undetected, particle is a mathematical fiddle-factor put in to account for the existence of that not-insubstantial property of matter known as mass. Add the fact that the model depends on 18 arbitrary assumptions to hold it together; that there is no place in it for either quintessence or WIMPS; and that it fails to account for the universe being made of matter (as opposed to antimatter or, indeed, pure microwaves), and there is clearly still a lot of explaining to do.

Yet, for all its shortcomings, the Standard Model is a triumph. It is the result of collaboration by theoreticians, who use mathematics to predict how nature should behave, and practitioners, who use machines called particle accelerators to test those predictions by heating things to temperatures in the lower reaches of physics before the first ten microseconds.

The particle zoo

Twelve of the 17 Standard-Model particles are the ingredients of matter. They are known as fermions,

after Enrico Fermi, the physicist who built the first nuclear reactor, and who also gave his name to Fermilab, a particle-physics laboratory near Chicago. Six of the fermions are the quarks. These interact through electromagnetism, and also through the strong and weak nuclear forces. They come in three pairs, only the least massive of which occurs naturally at post-first-ten-microseconds temperatures. These stable quarks, known as “up” and “down”, combine to make protons (two ups and a down) and neutrons (two downs and an up), and thus the nuclei of atoms.

Another six fermions are known as leptons. They do not feel the strong nuclear force. Instead, they interact through its feebler cousin, the weak nuclear force. They also come in three pairs, one member of each pair being measurably heavy (though lighter than a quark) and one being of minuscule mass. The insubstantial particles are the neutrinos; they have no electric charge, and until recently they were thought to have no mass at all. Observations carried out down mines over the past couple of years (see box, next page) have shown that they do have a little bit of mass, but not enough for them to be WIMPS. The more massive members of each lepton pair are the electrically charged electron (the outer constituent of atoms) and two other particles that resemble electrons in all measurable ways except that they are heavier, and are unstable in today's modern universe.

The remaining five particles in the model are called bosons (after Satyendranath Bose, an Indian physicist who collaborated with Einstein). Four are the physical manifestations of the forces through which particles interact: photons carry the electromagnetic force and are familiar in the form of light, radio, microwaves etc, W and Z bosons carry the weak nuclear force, and gluons the strong nuclear force. The fifth, the Higgs boson (after Peter Higgs, a British physicist who helped to predict it), is what gives other particles their masses. This is the mathematical afterthought to the main body of the Standard Model, and nobody knows for sure whether it actually exists.

The linchpin of the model is the underlying unity of two of the three forces: electromagnetism and the weak nuclear force. Accelerators can now be cranked up to energy levels where these forces melt into one another. The resulting “electroweak” force is a first step towards reconstructing the cosmic magma.

In mathematical terms, each crystallisation from the magma is described as the breaking of a symmetry. Symmetry is familiar in everyday life. Bilateral symmetry means that something can be superimposed on its mirror image. Rotational symmetry means that if you turn something through a fixed angle, it looks the same (as a starfish would if you turned it through a fifth of a circle). Mathematics recognises many sorts of symmetry, not all of them amenable to these sorts of geometrical analogy. Restoring the magma means restoring perfect symmetry to the universe.

One of the most critical symmetries currently being explored is that between matter and antimatter. The best explanation of why the universe consists of matter is based on the hunch that despite appearances, matter and antimatter are not, in fact, perfectly symmetrical.

When inflation ended, and the universe had cooled enough for virtual particles to emerge from the magma, particles and antiparticles should have appeared in exactly equal numbers. Inject enough energy into virtual particles, though, and they become real ($E=mc^2$ again). This can be done in an accelerator. In the early universe, which was filled with homeless energy, it happened naturally.

When the universe had cooled some more, those particles and antiparticles should have gone on to annihilate one another, leaving only photons behind. That did not happen, so the Standard Model, which does contain a small asymmetry between matter and antimatter, but not one big enough to count, must be wrong.

Photons were, indeed, produced in great numbers by the mutual annihilation of the primitive particles and antiparticles. It is these photons, now massively red-shifted, that form the cosmic microwave background. About 99% of all the photons in the universe are part of the CMB. Light from stars is trivial by comparison. Nevertheless, when the annihilation was complete, a small amount of matter was left over. Estimates of the intensity of the CMB, and the number of subatomic particles in the universe, suggest that for every billion mutual annihilations, a solitary particle of matter survived. It is that tiny asymmetry which produced a universe with enough tangible stuff in it to form galaxies, stars, planets and, ultimately, people. Two specially designed accelerators, one in California and one in Japan, are searching for such an unpredicted breakage in the symmetry, though they have yet to find any sign of it.

In a bid to restore yet more symmetry to the universe, a number of particle physicists are developing a theory called supersymmetry. This was originally proposed a quarter of a century ago by Julius Wess, (now at the University of Munich) and Bruno Zumino (at the University of California, Berkeley). It seeks

to simplify things by making them more complicated.

Humpty Dumpty sat on a wall

Supersymmetry gets round part of the broken-symmetry problem by doubling the number of types of "fundamental" particle. In it, every fermion in the Standard Model has a partner (a "sparticle", in the argot of the subject). This partner turns out to be a boson. Contrariwise, each Standard-Model boson has a sparticle partner that is a fermion.

Particle physicists like supersymmetry because, even though it doubles the number of fundamental particles, it actually does simplify the Standard Model. The new symmetry it introduces eliminates the need for two fudges in the existing scheme of things. One is the arbitrary, bolt-on nature of the Higgs boson. In the mathematics of supersymmetry, the Higgs (or, more commonly, a collection of Higgses) emerges quite naturally. The second is a number of infinitely large results that, rather inconveniently, appear in Standard-Model mathematics. At the moment, these are disposed of by yet another mathematical fiddle. Sparticles introduce equal and opposite infinities, which cancel the original ones without any prestidigitation.

The Sudbury Neutrino Obervatory

As mentioned earlier, cosmologists like supersymmetry, too. If it is true, there is a good chance that their missing WIMPS are sparticles. Like the low-mass quarks and leptons, the lowest-mass sparticles would never decay. They would also be produced in large numbers in the first few microseconds. And they would be much heavier than quarks and leptons, which would help to explain why they made up a quarter of the universe, rather than the 4% accounted for by so-called ordinary matter.

Perhaps the best thing about supersymmetry, though, is that it will soon be testable. A search for sparticles is about to start at Fermilab. If they do not turn up there, a more powerful machine being built near Geneva may find them once it begins operations in 2006 (see article).

Of course, they may not be there to find. Supersymmetry has a rival, called technicolor by Lenny Susskind of Stanford University, one of its inventors (the other is Steven Weinberg of the University of Texas at Austin). Technicolor has an alternative set of maths from which Higgs bosons also emerge quite naturally. Equally naturally, it invokes an alternative set of new, heavy particles.

There is also a third line of inquiry, and one which is causing a lot of excitement. This tackles the most glaring omission of the Standard Model: that it has no place for gravity, the fourth and most ubiquitous of the known forces of nature. Both supersymmetry and technicolor try to deal with this problem, but they only really sidle up to it. The third line of inquiry confronts it head on, by the simple expedient of invoking a few extra dimensions.

String-driven thing

Appearances in fundamental physics are often deceptive. Just as the matter perceived as "ordinary" by people is but a tiny fraction of the total, so the number of dimensions in which those people lead their lives is but a fraction of the number that really exist. That, at least, is the view of those who believe in string theory.

This theory, which underpins both of the beyond-the-Standard-Model models of physics outlined above, argues that elementary particles are not points. Rather, they are minute vibrating strings. Like the strings on a musical instrument, these elementary strings are essentially one-dimensional. Also, like such strings, they can vibrate either at a base note, or at a series of harmonics. Different harmonics correspond to different particles of the same family. To make the theory fit reality, though, requires the presence of six extra dimensions, in addition to the three familiar spatial ones plus time. These extra six are thought of as being tightly curled up on scales too small to be measurable with any instrument that

might be built in the foreseeable future—or, probably, ever.

String theory has developed gradually over the past three decades. One of its most important attributes is that it reconciles quantum theory and general relativity. “Quantising” gravity requires that it, too, has a boson. Gravitons, as the putative bosons of gravity are dubbed, are an inevitable consequence of string theory. So, if the theory were true, the two incompatible views that shaped 20th-century physics would be able to kiss and make up.

Since the mid-1990s, an important modification to string theory has emerged. This is known as membrane theory (M-theory for short). M-theory regards the spaces defined by the dimensions of string theory as being like multi-dimensional membranes (referred to as “branes” to distinguish them from their two-dimensional prototypes). These branes float around in an 11th dimension. And it is here that gravity enters the picture.

Something that has disturbed physicists for a long time is that gravity is so weak. This was noticed even before the strong and weak nuclear forces were discovered. The ratio of the strengths of the electrical repulsion between two protons and their mutual gravitational attraction is represented by the letter N. Its value is about a trillion trillion trillion to one.

M-theory regards the 11th dimension as gravity's true habitat. The force spends most of its time there, and only rarely visits the dimensions of the branes. That is why it is so weak. But unlike the six curled-up dimensions of basic string theory, the 11th dimension of M-theory, although small, may not be undetectable. Some versions of the theory suggest it may intrude into 3D space over distances of a tenth of a millimetre or so. That is eminently measurable; it is just that no one has, until recently, bothered to try measuring the gravitational attraction between objects less than a tenth of a millimetre apart.

Fermilab, showing the Tevatron

Eric Adelberger, at the University of Washington, in Seattle, is now doing so. M-theory predicts that the attraction may be stronger than expected, though Dr Adelberger has not yet found any discrepancy. It also predicts that it should be possible to make gravitons in particle accelerators, so the computer programs that analyse their results are being modified accordingly.

If the gravitational predictions of M-theory turned out to be correct, it would be powerful evidence in favour of the untestable assumptions of the string theory that underpins it, which is already the best available candidate for a “theory of everything”. One of the reasons string theory is popular is that in mathematical terms it is completely internally consistent. There is no need for arbitrary assumptions. There are no loose ends. Except one. This is that besides the solution that seems to describe the symmetries of the universe, there appears to be an indefinite number of other solutions, each with its own, private set of symmetries, that do not.

That need not be a problem. After all, there are many mathematically consistent versions of geometry, but only one corresponds to the real world. And yet in the history of physics unexpected mathematical results have often pointed to unsuspected realities. Antimatter, for example, appeared as a negative term in an equation long before it appeared in a particle accelerator. That indefinite number of solutions to string theory points towards the most mind-blowing possibility of all: that the universe itself is not unique, but is just one example of a possibly infinite number of “universes”. It would be the ultimate downgrading of mankind. Far from being centre-stage, as the first astronomers believed, humanity has already been shuffled gradually out of the limelight by each new cosmological insight. An infinite number of universes would reduce it to utter cosmic insignificance.

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Money pits

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Fundamental physics is a costly game to play

NOT every cathedral makes it to completion; sometimes the cash runs out. That was true in the Middle Ages, and it is true today. A little south of Dallas, Texas, there is a 22km-long hole in the ground that is a testament to the tension between physicists and their paymasters. The hole, had it been bored to its full, 87km circumference, would have housed a machine called the Superconducting Super Collider (SSC), which would have been the world's biggest particle accelerator.

Accelerators use electric and magnetic fields to whip electrically charged sub-atomic particles (electrons, protons and their antimatter equivalents) up to speeds near that of light. As the particles travel faster, they become more massive (because $E=mc^2$). When they have become massive enough, they are either slammed into stationary targets or (for extra energy) collided head-on. The result is a shower of new particles, which give clues to the nature of the cosmic magma.

Boring the tunnel for the SSC, and building the machine, was expected to cost $8 billion. By the time the plug was pulled, in 1993, $2 billion had already been spent. An occasional shock, though, is good for the system. The SSC fiasco has encouraged physicists to try to do more with less—and to make use of existing holes, rather than digging new ones.

One such hole is that housing the Tevatron, the main accelerator at Fermilab, outside Chicago. This machine, currently the world's most powerful (its ring is nearly 7km in circumference), has recently undergone a major upgrade. The Tevatron's operators are hoping that means it can now come up with the first clear indications of supersymmetry (or its rival, technicolor). They are also looking for the still-elusive Higgs boson.

The existing hole in which physicists are putting most store, though, is 27km in circumference, and straddles the Franco-Swiss border near Geneva. It belongs to Fermilab's European rival, CERN, and until 2000 it housed an accelerator called the Large Electron-Positron ring. That has been removed, and is being replaced by a machine called the Large Hadron Collider (LHC), which will send protons and antiprotons head-to-head. Since a proton weighs 1,836 times as much as an electron (though no one knows why; it is another of the Standard Model's mysteries), much higher energies can be achieved for a given speed.

When the LHC opens for business in 2006, it will reach deep into the energy range of supersymmetry, and will be able to explore physics beyond the Standard Model in some detail. Yet, although it is being recycled, the CERN hole did have to be purpose-built in the first place. The cheapest holes of all are those dug by other people.

One particularly big hole that physicists did not have to excavate for themselves is INCO's Creighton nickel mine, near Sudbury, Ontario. This houses the Sudbury Neutrino Observatory (SNO), which cost a mere C$73m ($49m).

Neutrinos are naturally abundant (they are made in the nuclear reactions that power the sun), but they interact with more familiar forms of matter via the weak nuclear force—that is to say, not very often. SNO consists of a huge sphere filled with heavy water, and surrounded by light detectors. It is buried in a cavern 2km underground in order to avoid the confusing effects of cosmic rays (which are absorbed by the covering rock). Occasionally a neutrino will interact with the heavy water, and the ultimate result is a cone of light that points in the direction it came from, and indicates what sort of neutrino it was. (The detectors that do this are delicate; recently, most of those on a similar observatory in Japan shattered spontaneously.)

By studying the ratios of the three sorts of neutrinos, SNO's scientists have worked out that one sort can

turn into another. This requires that the particles have a small mass. The Standard Model, however, predicts them to be massless, so the result is yet another crack in it.

Cleveland Potash's Boulby mine, in England, is the site of a cheap but speculative detector of a different kind. This is run by the UK Dark Matter Collaboration, which is looking for WIMPS. It uses a technique similar to SNO's but instead of heavy water, it employs liquid xenon. If it finds WIMPS before the Tevatron or the LHC, that truly will be one up to small, cheap science.

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There was an old lady who swallowed a fly

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The universe might make more sense if it was not alone

THE idea of multiple universes is a surprisingly attractive one. Two deep problems would go away if the universe were not, in fact, universal, but were merely one example of an infinitely large class of such objects. These problems are the true nature of the uncertainty principle, and the “anthropic principle”—the coincidence that the universe seems to be set up with precisely the right conditions for human-like life to evolve within it. Unfortunately, the sorts of “multiverse” proposed to resolve these two problems are different.

The uncertainty principle was developed as part of a way of thinking about quantum theory that is known as the Copenhagen interpretation, because it was orchestrated by Niels Bohr, a Dane. Heisenberg was one of Bohr's students. But there is an alternative, first proposed in 1957 by Hugh Everett. This is that the universe does actually behave in the deterministic way that 19th-century physicists thought it did; it just looks uncertainly probabilistic. For this to work, however, it cannot be alone. Instead, each event that happens spawns an infinite number of parallel universes, and, taken together, the various versions of the event in question happen with the probability dictated by the uncertainty principle.

At the time, most researchers rejected Dr Everett's explanation as being even harder to swallow than the Copenhagen interpretation. But it has been taken up in the past few years by David Deutsch, a researcher at Oxford University. Not only does Dr Deutsch believe in Dr Everett's parallel universes; he thinks it might be possible, in a manner of speaking, to collaborate with them.

The universe-straddling machines he has in mind are called quantum computers. Primitive versions of them have now been built and enthusiasts, Dr Deutsch included, think they could become a mainstream technology in decades to come.

An ordinary computer works by manipulating “bits”—binary digits—of data. These are either one or zero. A quantum computer manipulates “qubits”. In the Copenhagen interpretation, their values are indeterminate until an observer attempts to examine them (if he does, the uncertainty “collapses” and he is left with an ordinary, non-quantum bit).

The result is that lots of calculations can be performed in parallel, as long as their intermediate steps remain unexamined. So a quantum computer with a given number of qubits is more powerful than an ordinary computer with the same number of ordinary bits. Indeed, the number of possible calculations goes up exponentially with the number of qubits. In fact, it would not take a particularly large quantum computer to perform more parallel calculations than there are elementary particles in the visible part of the universe, let alone in the computer itself.

Dr Deutsch argues that the computation cannot, therefore, be happening in a single universe. Computing is not an abstract process. The information being manipulated has to be associated with something physical. The only possible explanation, he thinks, is that the separate, parallel calculations are being done in separate, parallel universes. In other words, the different, parallel machines in the different, parallel universes are collaborating.

The dirty half-dozen

For most people, superseding the Copenhagen interpretation of quantum theory probably comes into the “angels dancing on pinheads” category of problem. “Why are we here?” may be a rather more fundamental question. As Sir Martin Rees points out, the conditions for human life to evolve depend on six fundamental physical phenomena—in other words, six numbers—being almost exactly what they are. Yet none of the values of these numbers is implicit in existing physical theory.

Two of the numbers Sir Martin identifies as critical to human existence are *omega* and *lambda*. If *omega* were higher, the universe would have collapsed back in on itself by now; if lower, it would have expanded too fast for galaxies and stars to form. A larger *lambda* would have had the same effect as a small *omega*. A third critical number is N. If it were significantly smaller (ie, gravity were more powerful in relation to electromagnetism), only a small, short-lived universe would be possible. A fourth is the number of extended dimensions. Life would be impossible in a two-dimensional universe: there is insufficient scope for the development of complex structures. Less obviously, it would also be impossible in a universe with four large-scale spatial dimensions. Both gravity and electromagnetism are governed by the inverse-square law, that is, their strengths drop with the square of the distance they are acting over. This is a basic consequence of geometry. Add a dimension, and the drop-off would be an inverse cube. That would cause chaos. To take just one example, there would be no stable orbitals for electrons around atoms. Atoms would not exist, so there would be no life.

Two other critical numbers have not been mentioned earlier. *Epsilon* measures the strong nuclear force. If this were changed, the chemical composition of the universe would be radically different, because the nuclear-fusion reactions that convert hydrogen into heavier elements in stars would produce a different mixture of elements. In particular, there would be very little carbon, which would make it hard for carbon-based life forms to emerge from the primeval soup.

Q is a measure of how tightly the things in the universe that are held together by gravity are bound by that force. It is the ratio between the energy of binding and the energy bound up in the mass of the object ($E=mc^2$ yet again). Its value is about 1:100,000. If it were much smaller than this, the quantum ripples frozen by inflation would not have been attractive enough to act as seeds for the formation of superclusters. The universe would then contain a uniform gas. If it were much larger, most gravitationally bound objects would collapse into black holes—things of such density that not even light can escape their gravitational fields.

There are four competing ideas about why these numbers have the values that they do. One, of course, is that God willed it that way. The second, which is perhaps a non-deistic restatement of the first, is that when the theory of everything is worked out properly, it will be seen that these particular values of these particular constants are necessarily inevitable. The third is that they emerged by blind chance; a happy coincidence. The fourth is that they are actually a mixture of chance and necessity. It is chance that this particular universe fits, but because there is an indefinite (in effect, an infinite) number of universes, each governed by different solutions to string theory, some of those universes (indeed, also an infinite number of them) must have the right conditions for carbon-based life. Of course, life will arise only in those particular universes, so observers will only ever see that set of conditions. They must infer the existence of the others.

Once, such ideas of multiple universes were mere speculation, unsupported by theory. Now, although they are still speculation, that speculation has had numbers attached to it by Andrei Linde, Alexander Vilenkin and Alan Guth. When these researchers revisited Dr Guth's inflation theory recently, they found that it could be extended—indeed, it more or less insisted, in a mathematical sense, on being extended—into something that they have dubbed “eternal inflation”.

The difference between eternal inflation and the original variety is the speed with which the inflationary force-field is expanding, relative to the speed with which it collapses to yield a universe expanding at a normal, Hubble-type, rate. The revamped calculations suggest that the field outpaces its own tendency to collapse. The result is a continuously growing set of local collapses—in other words, a growing set of universes.

This multiverse would still require a definite beginning (presumably a quantum-tunnelling event, or something similar). Once it got going, though, it would spawn new universes indefinitely.

That is just what the doctor ordered—at least if the doctor in question is Dr Rees. There is no reason to suppose that the laws of physics in each of the universes would be the same. Eternal inflation, therefore, neatly disposes of the anthropic problem.

Universal breeding grounds

Eternal inflation is not the only way to create multiple universes that cosmologists (as opposed to quantum mechanics) have dreamed up. Lee Smolin, of the Perimeter Institute for Theoretical Physics, in Waterloo, Ontario, has a different multiversal explanation for the way things are. In his model, less

comprehensively worked out than eternal inflation, newly formed black holes are the seeds of new universes. These then expand outwards in their own, private dimensions independent of those in which the hole formed. In effect, each universe gives birth to another every time a black hole forms within it.

That is not (at least by cosmological standards) an implausible idea. Dr Smolin, however, goes further. By adding one extra assumption, he creates what might be thought of as a cosmic ecosystem. This assumption is that the laws of physics in a baby universe are similar to, but not always identical with, those of its parent. The result is like asexual reproduction in a living organism. The laws of physics correspond to an organism's genes. And, since the reproduction of universes requires black holes, “mutations” in the laws that enhance black-hole production will be favoured by producing universes that have lots of offspring. Of course, if Sir Martin is right, that subset would probably have a high value of Q, and so would not be suitable for people.

To add to the confusion, there is yet another branch of multiverse theory, although this requires only two universes. On the other hand, if it is true, many of the ideas that have been rehearsed in this survey are false: for this theory plans to dispose of inflation.

Ekpyrosis is an idea that is only a few months old, and is evolving fast. It was dreamed up by Paul Steinhardt, at Princeton, and Neil Turok, of Cambridge. It is a version of M-theory in which two branes (in effect, two parallel universes) collide every so often. Such collisions, according to the calculations done by Dr Steinhardt and Dr Turok, would produce almost the same results as inflation. Originally, the theory described only one collision, but now the two researchers have extended it. They believe the two branes clash regularly (say once every few trillion years). Each time this happens, a new wave of creation is started.

Like all the best cosmic creation-myths, this one seems testable. Once again, MAP may provide the answer. Inflation would have produced gravitational waves. These should have imprinted the cosmic microwave background with a recognisable pattern in addition to the one created by the frozen quantum fluctuations. Ekpyrosis would have no such consequence. Absence of evidence is not, of course, evidence of absence, but if the predicted pattern is missing, then inflation, which currently lives by the cosmic microwave background, may end up dying by it.

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Queerer than we can suppose?

Jan 3rd 2002
From The Economist print edition

The truth is out there. Maybe

Haldane contemplates how strange it all is

DRAWING on an older mythological tradition than physics, Steven Weinberg, one of the doyens of the subject, compares humanity's imbibing of physical knowledge to Siegfried's imbibing of the dragon's blood in Teutonic legend. That gave the hero strange powers of understanding. He could, for instance, comprehend birdsong.

Modern physics has certainly extended human understanding in ways that would scarcely have been conceivable only a century ago. The modern creation-myth, unlike its truly mythological predecessors, has real explanatory power. But it certainly does not explain everything. Perhaps the deepest question of all is whether it can ever explain everything.

It is probably fair to say that most physicists hope it can. But not all truly believe that it will. There is, first, the question of whether it will be allowed to. Star-gazing is an ancient hobby, but scientific astronomy blossomed only when it turned to questions of land-surveying and navigation at sea. Particle physics came to power because it provided politicians with the ultimate weapon. Since these practical beginnings, though, both subjects have become scientific luxury goods.

At the moment, governments (and, in the case of astronomy, private foundations) are rich enough and indulgent enough to let researchers play. As the Superconducting Super Collider showed, though, their patience is finite. Meanwhile, the price of the playpen, particularly for particle physics, is still going up. Any machine bigger than the Large Hadron Collider will surely have to be a global collaboration. And unless a radically new technology becomes available, the pursuit of string theory is beyond the pocket of even a transnational effort.

Particle physics, therefore, risks grinding to a halt for purely pragmatic reasons. Cosmology faces a different, and more subtle, threat. Its instruments, though costly, are not unaffordable. But some people question its very methodology.

One of the leaders of such dissent is Michael Disney, of Cardiff University, in Wales, who describes himself as an extra-galactic astronomer rather than a cosmologist. He points out that particle physics is an experimental science. Its theories can be tested over and over again, in different ways and in different machines. Cosmology is an observational science. You cannot manipulate conditions to explore a theory. And the most cosmologically interesting bits of the universe are those closest to its beginning. But those are also the farthest and faintest (because the finite speed of light means that to see objects when they were young means looking at things billions of light years away). They are therefore the least easily interpreted. Cosmology, in other words, is a mountain of theory built on a molehill of evidence.

As far as the core of the theory—the idea of a Big Bang—is concerned, that judgment is probably too harsh. The independent lines of evidence pointing towards it appear compelling, whether it was caused by cosmic inflation or a clash of branes. But the fact that two such different theories can apparently explain the same body of data suggests that Dr Disney has a point.

On the more substantial questions of whether there really is an ultimate explanation, and whether physicists are close to finding it, apostles of string theory tend to believe that the answers to these questions are “yes” and “probably”. But few other than Stephen Hawking wish to stick their necks out by predicting how long it will take (let alone lay money on it). Past experience in physics has been of unsuspected deeper explanations and unexpected results. So perhaps the last word should go to J.B.S.

Haldane, a British scientific polymath of the early 20th century, who once said: “My own suspicion is that the universe is not only queerer than we suppose, but queerer than we can suppose.” The modern myth-makers, like their religious forebears, may be chasing shadows after all.

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The author would like to thank all those physicists, both quoted and unquoted, whose research—and in many cases personal assistance—contributed to this survey. Readers whose appetite has been whetted will find a selected list of approachable books below.

"Dreams of a Final Theory" by Steven Weinberg

"The Fabric of Reality" by David Deutsch

"The Life of the Cosmos" by Lee Smolin

"Just Six Numbers" by Martin Rees

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Conglomerates in developing countries

Monsters still, but prettier

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Globalisation is forcing conglomerates in poor countries to change

JAIME AUGUSTO ZOBEL DE AYALA, chief executive of Ayala Corporation, the largest conglomerate in the Philippines, is rare among Asian tycoons for his willingness to ponder the imponderable. Every so often, he discusses with his brother, father and Ayala's other directors whether they should break their conglomerate up. After all, Ayala owns, among other things, the Philippines's most profitable property developer, bank and mobile-phone operator. Any of these could easily stand alone, and Mr Zobel knows that global investors usually prefer focused companies. So will he give them focus?

Not yet. Instead, he plans to give shareholders change of a far more interesting sort. There are good and enduring reasons why conglomerates thrive in such inefficient markets as the Philippines. At the same time, globalisation poses challenges that are catching many traditional conglomerates off guard. So Mr Zobel's vision is to turn Ayala into a new model for conglomerates, one that exploits market inefficiencies as well as globalisation.

The case against conglomerates is compelling. Capital markets, the argument goes, are better than chief executives at allocating resources among industries. Why should a fund manager who likes, say, telecoms also be forced to invest in property? If he wants exposure to both, he can build a portfolio better than any conglomerate boss could. Conglomerates therefore tend to have lower market values than the sum of their operations. Focus brings other benefits too. Managers do not have to divide their time, energy and expertise among industries.

These arguments, however, appear to apply only in a specific historical context. Take America, which probably has the most focused companies in the world: the oft-cited success of General Electric, an outstanding conglomerate, is the exception that proves the rule. Yet a century ago America's biggest companies were all conglomerates, run by “robber barons” not unlike today's tycoons in poor countries. Demergers and spin-offs became seriously fashionable only after the 1970s.

The most likely explanation for this evolution is that conglomerates go out of fashion as markets become more efficient. Krishna Palepu and Tarun Khanna, two professors at Harvard Business School, argue that efficiency arises from the presence of “specialised intermediaries”. In the market for capital, these are mutual funds, venture capitalists, equity analysts, auditors, and so forth. In the market for labour, they include executive-search firms, vocational and business schools, and certification agencies. In the markets for products and ideas, they include intellectual-property lawyers and consumer activists. The America of the Rockefellers and Morgans had few such intermediaries, just as poor countries do today.

Hence the appeal of conglomerates. They are their own intermediaries. In a country that lacks a functioning stockmarket, a conglomerate can channel cash from one business to another. If educational levels are low, it picks the brightest, trains them in one subsidiary and transfers them to another. If property, contract and liability laws are confusing and the courts venal, it substitutes the group's reputation in transactions. Thus arose the family empires of the overseas Chinese in South-East Asia, the *chaebol* in South Korea, and conglomerates in India and South America.

The Asian financial crisis of 1997 exposed the flaws in this model, with a brutal cull of many once-illustrious conglomerates. Past success was now attributed less to internal talent pools than to cronyism, if not corruption. Internal capital markets were now maligned as cross-subsidisation or empire-building,

and were blamed for wasteful investments. Complexity became synonymous with opacity, as minority shareholders realised they had no way of tracing how their investments in a conglomerate were being used.

How globalisation hurts

Globalisation is exacerbating these shortcomings in two ways. The first is the entry of multinational giants into industries that used to be protected. In banking, for instance, local conglomerates, in effect, held depositors captive until recently, but they are now confronting the likes of Citibank and HSBC, who have global back offices and lower costs of capital. The second threat is the increasing mobility—ie, flight—of talent. In the past, the career path of a gifted software programmer in a poor country inevitably led to a local conglomerate. Now it might lead to Silicon Valley, or to a multinational company. Mr Zobel says that Ayala's bank has lost about a quarter of its IT professionals in this way.

Concluding from all this that conglomerates will die out, however, would be naive, says Mr Khanna. In reality, some countries take many generations to acquire efficient markets. Farsighted conglomerates can use this respite to adjust to globalisation. But how?

The winning model may already exist. It is that of a typical venture-capital fund in the West, but with the local connections of the conglomerates—a “VC plus”, as Ken Gibson, a consultant at McKinsey, puts it. Like any good venture capitalists, survivor conglomerates will concentrate on spotting new opportunities and finding the talent, capital and partners to exploit them. They will avoid like the plague transferring funds between ventures, staffing subsidiaries with incompetent family members, conducting dealings that are not transparent to the outside, and other old tricks.

Ayala is pioneering this strategy. It operates a “talent bank” of several dozen executives, sending some to American business schools and drafting others in from the Filipino diaspora before dispatching them to subsidiaries. It keeps its business practices squeaky clean, in order to be first choice for foreign partners and investors. And it issues new equity only to finance new ventures. Ayala's expansion into mobile telephony in recent years is a case in point. It sold shares to western investors, invited Singapore's telecoms incumbent to be a partner, seconded executives from the talent bank, and, after years of losses, now runs the most profitable mobile operator in the country. To make the conglomerate's new culture more explicit, Mr Zobel recently created a new subsidiary, run as a venture-capital fund.

Ayala is not alone. Other reformers include the Tata group, India's largest conglomerate, and the companies controlled by Li Ka-shing, the biggest entrepreneur in Hong Kong. But most tycoons are finding change hard. Take Lucio Tan, who controls the other large conglomerate in the Philippines. A Chinese immigrant, Mr Tan used his connections during the dictatorship of Ferdinand Marcos, and again during the presidency of Joseph Estrada, to build an empire ranging from tobacco and brewing to banking and aviation. Both leaders left after popular uprisings, and Mr Tan, who is notorious for his secrecy and unloved by former investors, today finds business challenging. He still keeps four helicopter pads on a Manila rooftop. Visiting business leaders, however, are rarely on his choppers these days; they are sitting in Ayala's headquarters across the street.

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America's steel industry

Trouble on the Cuyahoga

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Lessons from the death of LTV

Get article background

THE great blast furnaces have fallen silent at the Cleveland works. Men in hard hats hammer boards to building windows. Truckloads of coke lie abandoned on the banks of the Cuyahoga river, soaking up the winter rain. This proud, blue-collar city is in shock. A bitter fight to save LTV, a big, old-fashioned steel maker, has failed. Thousands of workers have lost their jobs. Tens of thousands of pensioners will lose health-care benefits.

LTV filed for bankruptcy a year ago. At first, there was hope that it might be saved. Dennis Kucinich, a local Democratic congressman, proposed a grand coalition to save the company. Mr Kucinich even took to hugging William Bricker, the plain-spoken Texan brought in to restructure LTV. And the United Steelworkers of America, whose relationship with LTV had been about the worst in the industry, seemed ready to cut a deal.

A year later, LTV's drama ended with Mr Bricker run out of town and 400 forlorn steelworkers camped in tents in Washington, DC, begging for a government rescue. On the face of it, the company is one more victim of a flood of cheap imported steel that has, since 1997, helped to push 29 American steel companies into bankruptcy. US Steel, one of the few big, old-line steel makers still out of the courts, has offered to consolidate the industry, initially by merging with Bethlehem Steel, another big producer. First, however, US Steel wants government money, protection from imports and concessions from the union. What happened at LTV sheds light on the prospects for such a plan.

The first signs of trouble came in the spring of 2001, when Mr Bricker put his plan to revise LTV's labour contract to high-ranking union officials. Mr Bricker wanted to cut $800m from annual overheads. Unionised labour accounted for one-third of LTV's costs. “You couldn't really walk around the problem,” says Mark Tomasch, LTV's spokesman. At first, Mr Bricker left wages untouched. But he wanted to shift the unionised workforce into a managed health-care scheme (to which white-collar workers already belonged) and to cut pensioners' health-care benefits, which cost the company $160m a year, by half. The union gave ground on some issues, but refused to budge on pensioner benefits, fearing that it would have to make concessions with other steel makers too. LTV's problems were typical of the entire industry's: 7,500 workers supported the health-care costs of 50,000 pensioners.

Talks broke down, and the union struck a deal instead with unsecured creditors. Pensioner benefits were preserved, although 1,300 jobs would go, so long as LTV secured a $250m government-guaranteed loan available under a special federal programme. Mr Bricker did not think the cost savings were enough, but with nothing else on the table, LTV agreed to pursue the deal and the loan. Crucially, however, the government wanted the banks to declare that LTV had a reasonable chance of repaying the loan. At this point, the economy, and the steel market, took another lurch downwards. Prices for a ton of hot-rolled steel were nudging $200, down from $350 only 16 months earlier. On September 27th, the banks gave their judgment: it was “highly unlikely” that LTV would repay.

What happened next is violently disputed. The union says the management pulled the plug on the company, and worked duplicitously to frustrate further deals. Reporters at *The Plain Dealer*, a local newspaper, along with officials at City Hall and most of Cleveland have largely bought the union's story. When Mr Bricker filed to liquidate LTV on November 20th, emotions were running high. Amid rumours that LTV planned to “cold idle” the plant—shut it down in a way that would make restarting it prohibitively expensive—Mr Kucinich sought a court injunction. Michael White, Cleveland's mayor, threatened criminal and civil action against LTV management. “We will not stand by and allow this city to be raped by greedy men who will sacrifice the lives of hardworking men and women in pursuit of the almighty buck,” said Mr White. Leo Gerard, the union's president, called LTV management “reckless and irresponsible”.

Bankruptcy-court documents filed by LTV (made under the threat of perjury) tell a different story. With the market so much worse, Mr Bricker had decided by October that his previous plan did not go far enough; only a deep cut in wages could secure the loan and perhaps save LTV.

He met the union on November 1st. But the union would not discuss details until the banks had approved the new plan. They did so on November 8th. A second meeting was set for November 14th, but the union postponed negotiations until November 19th. This was a day before the company had to reach a decision on liquidation, as it was almost out of cash. At that meeting, the two sides failed to agree. At 7pm that night the board, including its union representative, voted unanimously to liquidate. At no point did the company consider a cold idle.

One week later, the union returned with another deal, negotiated not with the management but with the unsecured creditors. This deal still fell short of the cost-savings that the management wanted and the banks had rubber-stamped. But LTV agreed to take it to the banks. Then, rumours of a cold idle surfaced, legal threats flew and Mr Bricker fled to Texas, taking with him what was left of his $1m bonus. “The city would have tarred and feathered him if it could,” says one Clevelander.

The unavoidable conclusion is that the union trashed managers in Cleveland to disguise its sacrifice of jobs and health-care benefits of members there to protect wages and benefits elsewhere. Lower-cost foreign steel makers have a quarter of the American market. Minimill operators such as Nucor, built on modern, flexible, non-unionised labour, have another quarter, and continue to take market share. All bankrupt steel companies have something in common, says Mark Parr of McDonald Investments, a local investment bank: the United Steelworkers of America. Even in bankruptcy, LTV could not get the cost cuts it needed. US Steel will find it even harder.

The union, however, refuses to accept that it must carry part of the burden of reform. President Bush is close to agreeing import quotas and tariffs on foreign steel, it says, and the emergency loan could have been secured with the right effort. However, in most parts of America, unionised steel is a curiosity, destined, seemingly irreversibly, for the history books.

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EU sauce policy

One lump or two?

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A saucy tale from Europe

HOW many lumps are allowed in a sauce before it can be considered a vegetable? This question—to be considered by a European Union committee on January 10th—may sound absurd. But trade worth hundreds of millions of euros rests on the answer.

The reason: whereas the EU tariff on imported sauce is only 20%, the tariff on an imported vegetable is 288%. Protectionists in the EU—mainly vegetable producers from the south—fear that vegetables may sneak into Europe disguised as tinned sauces. They have argued that, if a sauce is more than 20% made up of lumps of fruit or vegetable, it should be considered a vegetable. That hits such culinary delights as Unilever's Chicken Tonight, Heinz's Teletubbies pasta in sauce and Dolmio's Pasta Gusto.

Of course any multinational food producer worth its sauce has already shifted production to within the EU so as to get round the tariffs. The *euro*200m of sauce that EU countries still import is thus mainly lump-free. But other sauce markets now apply the lump test too, and their tariffs hit about half of the EU's annual sauce exports of around *euro*244m.

Big food producers such as Mars, Unilever and Nestlé were so irritated by these rules that they took a case against the EU to the World Customs Organisation. But, although the ruling went against the EU, there is no provision for sanctions. The EU has, however, graciously agreed to reconsider its rules. The European Commission is proposing raising the lump threshold to 30%. Still too low, scream the food companies, arguing—reasonably enough—that consumer perception should be the test; and that most people can tell the difference between a turnip and a tin of Teletubbies pasta in sauce. But the EU seems unlikely to change its mind. So the food companies may just have to lump it.

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Lebanon's postal system

Revamped and unused

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Lebanon has a first-class postal service. Too bad no one uses it.

A FEW years ago, only optimists would have dreamt of posting a letter in Lebanon. Today, that has changed. The problem now is getting people to use the post.

In 1998, the government granted a licence to SNC Lavallin, a Canadian contracting giant, to run the postal system. This was no minor endeavour. Years of war had wreaked havoc. Postmen, whose encyclopaedic knowledge of their neighbourhood had long been the backbone of mail distribution, had lost track of their flock during the fighting. Most streets have no name, and addresses are often no more specific than “second floor in the white building next to the flower shop”. SNC Lavallin brought in Canada Post as a technical adviser and created a new sorting and distribution system. Every building in the country has now been assigned a postal code, and most letters reach their destination within 24 hours.

The Lebanese, however, have learned to get by without a post office. Private courier services flourish; the government failed to enforce SNC Lavallin's monopoly. The company believed that the key to building mail would be to get financial institutions and utilities to use the postal system. But the reform of public utilities (and rationalisation of their billing) has been slow. People still pay utilities bills directly to the man who reads the meter, and collect bank statements at local branches. Although mail volumes have quadrupled since 1998—to 19m letters a year—the Lebanese remain lazy writers, averaging a disappointing four letters a head, compared with more than 700 in the United States. In 2001, the company decided to cut its losses and sold its rights to Lebanon Invest, a local private-equity company.

Can the new owner succeed where western experts failed? Snail mail may be losing ground to more modern forms of communication, but even in developed countries, ever more letters are being posted every year. Having secured a longer licence, Lebanon Invest expects to break even on mail delivery. But the real money, it thinks, lies in other uses for Libanpost's infrastructure. It wants to turn the company into a full-fledged distribution and logistics group, offering everything from one-stop billing to financial services, where the margins are higher than on mail delivery. As everywhere, it will take more than letters and stamps to build a profitable postal system.

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Face value

Rescue mission

Jan 3rd 2002
From The Economist print edition

Bob Lutz, the oldie with the task of rejuvenating the world's largest car maker

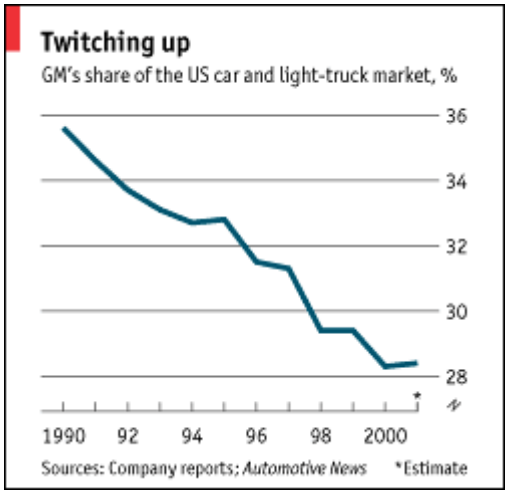
Get article background

NEXT week, the distinguished white-haired figure of Bob Lutz will be at all the poshest industry soirées at the Detroit Auto Show. A former pilot in the American marines, the Swiss-born Mr Lutz is nearly 70. Yet he arguably holds the future of the world's largest car maker in his hands. He was hired last summer as vice-chairman of product development at General Motors (GM). In November, in a sign of desperation, GM's boss, Rick Wagoner, put him in overall charge of the company's business in North America.

The task for this oldie is to rejuvenate the world's biggest car company. Mr Lutz has done something similar once before. His long career started with GM and took him to Ford and Chrysler. He left four years ago. In the motor industry, he is best known as the man whose product-development skills brought Chrysler back from the dead in the early 1990s, thanks to new cars and minivans that sold well. He was passed over to succeed Lee Iacocca as boss, but he gamely stayed on as president, and brought the company round to the point where Daimler-Benz wanted it as a partner. Besides, in spite of his silver locks, Mr Lutz is not a man to act his age. He likes nothing better of a Sunday afternoon than to leap into his Czech-made Albatros L-39 fighter, and tear through the Michigan skies.

As for GM, it has tried everything. Once, it made more than half the cars sold in America. For years, its market share has declined, eaten into by rival Japanese and European producers (see chart). In the 1980s the then chairman, Roger Smith, thought the answer was to spend $40 billion putting robots into factories. It wasn't; GM's fortunes went on declining. The present chairman, Jack Smith, thought the answer was to apply brand management to automobiles. So the company accordingly brought in a marketing wizard, Ron Zarrella, from Bausch &Lomb to sell cars the way his previous company sold spectacles and contact lenses. But GM continued to come up with dull new models or flops such as the Aztek off-roader. Mr Zarrella has gone back to run his previous firm.

Now, GM may have a chance, in Mr Lutz's phrase, for “turmoil and change”. In a business where momentum counts, GM's market share appears to have twitched up a fraction in 2001, thanks mainly to the weakness of Ford. Meanwhile the Big Three car companies in Detroit have had something of an epiphany. After years of thinking that success depended on lean manufacturing and reliable quality, they are coming to realise that these are necessary but not sufficient conditions. They have noticed that it is no good making cars efficiently if they are so dull that it takes discounts and cheap loans to move them (although discounts still help: GM launched a new round of them on January 3rd).



Got an idea?

To ram that point home at GM, Mr Lutz will have to stir up the world's most monolithic corporate

bureaucracy, and challenge the timid, conformist thinking that dominates so much of its decision-making, especially on product development. He sees his role partly as that of court jester, challenging the received wisdom. In fact, his task is more serious.

His first priority, he says, is to do something about the models that are already in the product pipeline, but not too far advanced to be improved. Already, GM has chopped the Buick Bengal, a sexy roadster that was proving hard to build; delayed the next model of the Cadillac Seville, to make the design more sensuous; and is pushing ahead speedily with trying to find a money-making small passenger car. Next, Mr Lutz aims to discover why so many poor designs emerge from GM's development system, and to stop that happening. Lastly, he says, he wants to give GM managers a better instinctive feel for their customers.

No sooner had he got his feet under the desk than he sent senior GM engineers a memo entitled “Strongly Held Beliefs”. Its thesis was that car design was hamstrung by formal procedures. “Design is being corporate-criteria-ed to death. Successful models come from people saying ‘hey, I've got an idea'.” It goes on to rubbish focus groups and the practice of loading dull cars with lots of fancy electronics to make them more enticing. Tellingly, he points out that successful models in America, from the likes of Honda, Toyota and Audi, offer these baubles only as expensive (ie, profitable) extras, because the basic cars are attractive enough in their own right.

Of course, things are not as simple as that, as Mr Lutz also recognises. An enticing car design could sell in millions, but still ruin a company if the manufacturing economics were wrong. The difference between profit and loss in the car-making business lies in such boring details as easy-to-stamp panels and parts that are interchangeable between models.

Despite Mr Lutz's flair and fame, some wonder whether a few pithy memos and pointed homilies will make a difference. One GM executive wickedly observes that the white-haired old warrior tends to nod off in meetings—to which the warrior retorts, “But I always wake up at the right time.” There are certainly doubts over whether a man of his age has the energy to change a company as big as GM.

It used to take five years for a bright new idea in a car company to reach market and make a contribution to increased profits. But the speed with which new models are reviving Nissan in Japan shows that the pace is accelerating. So Mr Lutz's three-year term at GM may be long enough to show results. The key question will be how far he can push his strongly held beliefs into GM's corporate culture. Since he retired from Chrysler, the company has lost its way; few good new products have come along to replace the winners that Mr Lutz brought to market. Approaching 70, even a boss youthful enough to pilot jets has to think about securing his legacy.

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Argentina's default

Foreign creditors join the pyre

Jan 3rd 2002
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Foreign claimants are not surprised about the biggest default in history

EPA

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ARGENTINA'S foreign creditors, back from holiday, are bracing themselves for a long wrangle for their money, amid uncertainty about whom they will wrangle with. The moratorium on the country's $155 billion of public foreign-currency debt, declared on December 23rd by President Adolfo Rodriguez Saa, who promptly resigned, at least cleared up doubts about how bad things could get.

Yet financiers, so far, have been surprisingly sanguine about the biggest default in history—one, they say, which had looked inevitable for about a year. The price of Argentine bonds had fallen to about one-quarter of their face value. That is just about the level at which opportunistic bottom-feeders come in and buy.

The Argentine bondholders committee, a group formed in November to put some big investors' views to the Argentine government, had difficulty this week finding officials in Buenos Aires to talk to. Its last meaningful conversation was on December 12th, with Daniel Marx, the government's veteran debt negotiator, who resigned two days later. Argentina's new president, Eduardo Duhalde, may reappoint Mr Marx. In the meantime, the only stable point of contact seems to be Argentina's New York law firm, Cleary, Gottlieb, Steen & Hamilton.

The clear event of default, however, has meant that investment banks have begun to pay out on credit-default swaps—instruments that guarantee payment should a borrower default. Earlier, banks had argued about whether Argentina's recent bond exchange, stretching out the maturity of $41 billion-worth of domestic bonds and swapping them for loans backed by tax revenues, had really been “involuntary”, that is, tantamount to a default which would trigger a payout. Now the argument, except in a few cases, is settled: banks selling swaps must pay up. The default swaps total at most $4 billion, but the moratorium means that investment banks will be left with the bonds returned to them under the terms of the swaps. That swells the ranks of bondholders wanting to be paid.

The question for bondholders is how firmly they should react, and how quickly they should reach for their lawyers. The mere announcement of a moratorium means that any bondholder can now “accelerate” his claim, demanding from the debtor immediate and full payment of principal and interest. Still, acceleration in this case is not likely to lead to prompt payment. Even irate bondholders recognise that Argentina has a problem and that it has not capriciously declared a moratorium.

Most creditors calculate that they will preserve most value by negotiation. Veterans of sovereign workouts recognise that negotiations will take at least two years, and that it may be six months before they even start. The tone of these talks will depend on how anxious Mr Duhalde's government is to keep channels open to international capital markets. Not very anxious, perhaps: creditors remember that Mr Duhalde, during his unsuccessful presidential campaign two years ago, even then proposed a debt moratorium.

In the short term, Argentina might find that the standstill gives it a breathing-space. Still, if it ignores its creditors, then problems might arise even with simple transactions, such as trade finance. Then comes the nightmare of creditors seizing Argentine assets abroad: aircraft or ships, for instance.

Because most of the bond covenants specify the use of New York law, and because they do not contain so-called “collective action” clauses, each bondholder is free to litigate separately—another nightmare, except for the lawyers. Sovereign debtors have been alarmed recently by the threat of “vulture funds”, speculative buyers of deeply discounted bonds in default, who then seek redress through the courts. An example is Elliott Associates, which in October 2000 won an out-of-court settlement of $58m against Peru, after nearly a decade of litigation.

The bondholders' committee is unlikely to take this route. Nor, so it says, is a group of mainly Italian retail investors who have written to the Argentine economy ministry suggesting that their bonds could be stretched out over ten years, provided that full principal and interest are paid. “We are simple people,” says their spokesman soothingly, “the same as those of Argentina—Italy was in the same position in the 1970s.” Nice sentiments.

Yet the sympathy of these and other bondholders does not extend to giving up their rights. They have been infuriated by the eloquent arguments of Nouriel Roubini, a professor of finance at the Stern School of Business in New York. Mr Roubini maintains, in a paper published on December 21st, that foreign bondholders should accept more pain in a sovereign-debt rescheduling than do domestic creditors. That is because pain is being borne domestically in so many other ways: through austerity packages, frozen bank deposits, reduced pensions and so forth. Meanwhile, foreign bondholders are often bailed out thanks to finance from multilateral agencies such as the International Monetary Fund.

The foreign bondholders are doubly alarmed because Mr Roubini, a former adviser to the American Treasury, is in close contact with the IMF. “A bond is a bond and must be paid,” one institutional investor fumes. Another says that Argentina is so far from addressing its real problems—including overextended provincial finances and endemic corruption among politicians—that the IMF should simply walk away and stay away.

The IMF's refusal to bail out Russia in 1998, and Argentina too, for now, are exceptions rather than a refreshing new trend. By contrast, strategic factors have governed rich-country aid for Turkey and Pakistan. Both countries are seen as important allies in the battle against global terrorism. Argentina may not have the strategic importance, in American eyes, to qualify for a further bail-out. Much hangs on Mr Duhalde's tenacity, and on how his administration is seen in Washington.

Keeping foreign bondholders happy is hardly Mr Duhalde's top priority, as international creditors realise. But maintaining a dialogue with them is important, and would cost Argentina little. In the longer term, the challenge is finding the strategy that would tempt foreign investors to put good money after bad.

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Spanish businesses in Argentina

Gored

Jan 3rd 2002
From The Economist print edition

Spain's leading companies stand to lose heavily in Argentina

Get article background

AFTER years of boasting about their expanding empire in Latin America, Spain's biggest companies are now suffering because of it. BBVA and Santander Central Hispano (SCH), the country's two biggest banks, Telefonica, the former state telecoms monopoly, Repsol-YPF, an oil concern, and Endesa, a power giant, all derive significant slices of their profits from Argentina, where they have invested tens of billions of dollars. These groups, whose shares together account for three-quarters of the trading volume on Madrid's stock exchange, now face a double blow: default on Argentine government debt and a devaluation of the country's currency.

The banks will be the hardest hit. Through the subsidiaries of BBVA and SCH—they own respectively Banco Frances and Banco Rio, Argentina's second- and third-largest banks—the Spanish banks control a fifth of Argentina's banking system. They are exposed to over $2 billion-worth of government debt apiece. On top of that, a devaluation of the peso would lead to a rise in bad debts, since over two-thirds of the loans to Argentine companies and individuals, most of whom receive income in pesos, are denominated in dollars. The banks maintain that they are cushioned against bad times. Together, they have put aside over $1 billion in provisions over the past year, and they will add more. Their Argentine subsidiaries are well-capitalised, they say, and the worst scenario would be no profits from them for two or three years.

Not everybody is convinced. Vasco Moreno of Fox-Pitt Kelton, a stockbroking firm in London, says that SCH and BBVA could face charges of up to $4.6 billion and $3.6 billion, respectively, thanks to Argentina's default. Mr Moreno says that the parent banks would not recapitalise Banco Frances and Banco Rio if their losses ran that high. As for fund managers, their fear, hitherto unfounded, is that Argentina's troubles could spill over to Brazil, where Spanish companies have a lot more at risk.

Argentina's latest president, Eduardo Duhalde, can expect an immediate visit from Spanish ministers eager to shield their country's companies from losses. In December, Felipe Gonzalez, a former Spanish prime minister, rushed to Buenos Aires to lobby for Spanish businesses. He told Fernando de la Rua, who stepped down as Argentine president shortly afterwards, that an uncontrolled devaluation would be fatal for both Argentine and Spanish companies.

For Telefonica, Repsol-YPF and Endesa in particular, such a step would sharply cut the value of the pesos they earn. Argentina accounts for at least 10% of profits at Endesa, two-fifths of revenues at Repsol-YPF, and at least 15% of profits at Telefonica. Some executives of Spanish multinationals fear that, in addition, they might come under popular attack as the presumed beneficiaries of Argentina's privatisation programme. When Endesa bought Edesur, the electricity distributor, the Argentine government allowed it to peg its tariffs to the dollar. Will it be able to insist on that peg after a devaluation?

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The Art Institute of Chicago

Stick to paintings

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From The Economist print edition

Oh, the charms of hedge funds

RISK-TAKING in art can produce spectacular results. Picasso and Pollock showed how to do it; the Art Institute of Chicago shows how not to. One of the world's best museums recently filed suit alleging fraud by a small Dallas firm called Integral Investment Management, along with related parties. The museum, which put $43m of its endowment into funds run by the defendants, says that it faces losses of up to 90% on the investments after they soured—despite repeated assurances that the funds were doing well. Before a Texas judge slapped a gag order on the parties, a lawyer for the defendants said that the museum's suit was “premature” and that all its money could be accounted for.

The episode raises eyebrows in Chicago, not least because it appears that nearly three-fifths of the Art Institute's $670m endowment is invested in hedge funds (mostly unrelated to Integral Investment). Some of the city's leading executives sit on the museum's board of directors, including the president of the Chicago Board of Trade (the museum board treasurer), a former chairman of Sara Lee and the chairman of Hyatt Hotels. Museum officials say the institute is on a sound financial footing. They defend their investment strategy, arguing that it has produced average annual returns of 10.5% over the past five years. All the same, the institute has launched an internal audit. It appointed a new chief financial officer after filing the lawsuit. (The predecessor had announced his retirement in September.)

Why did the museum board's finance committee invest so much in a group that touted a “proprietary low-risk” strategy but failed to answer basic questions about its investments? Believing that 70% of its money would be kept in cash, the Art Institute was shocked to learn that much of it was tied up in illiquid private investments, including a portfolio of distressed debt. The defendants' presentations to museum officials were full of talk about a complex “master feeder structure” involving offshore funds, and about investment strategies equivalent to “synthetic options”.

Two events alerted the museum to something wrong. One was a visit last autumn from FBI agents seeking information on museum dealings with Integral Investment. The other was an October letter in which Integral Investment told investors that, due to a steep fall in markets after September 11th, the liquidation value of one product, the Integral Hedging fund, would probably “reflect a loss of over 90%”. Withdrawals were temporarily suspended.

Whether the defendants were caught in a liquidity squeeze, or were up to something more questionable, is not yet clear. A court-appointed accountant is looking into the matter. Meanwhile, Morgan Stanley Dean Witter, Integral's primary broker until last summer, has fired a financial manager who handled Integral's account. The museum says its funds were invested in a manner “inconsistent” with the low-risk strategy it was seeking. In future, it may leave risk-taking to the artists.

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Japan's banks

To a head?

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Whether intentionally or not, it may be crunch time for the banks

THIS year offers a turning-point for Japan's troubled banks. Until now, rather than forcing banks to clean up bad debts of as much as ¥150 trillion ($1.1 trillion), the government has favoured stop-gap measures that have propped up the banks' weakest borrowers when they should have gone under. Investors in bank shares despair that the banks' problems will ever be confronted; or that if they are, there will be no end to them.

Certainly, the news in November that the biggest banks would write down ¥6 trillion of problem loans in the year to March 2002—three times their original target, and almost double their combined operating profits—failed to persuade investors of the banks' resolve. The four biggest banking groups saw more than ¥5 trillion wiped off their market capitalisation, a drop of roughly one-third, in the final six weeks of 2001. The Topix banking index is close to record lows.

The long drawn-out bank crisis may be coming to a head, however. The government has for years insisted that the banking system is sound, but now it is badly worried. Unless it restores confidence by April, when it has promised to lift its blanket protection of all deposits, the government fears runs on banks that could trigger a fresh crisis. To calm such concerns, the prime minister, Junichiro Koizumi, said on December 27th that he may inject public funds to boost banks' capital bases. The Financial Services Agency (FSA) is also, belatedly, trying to weed out the weakest banks. Its re-examination of Ishikawa Bank, a regional bank which it had earlier found to have more liabilities than assets, led to the bank's collapse on December 28th. The FSA is conducting a “special” inspection into the banks' biggest problem borrowers, in hopes of improving inadequate provisioning.

Indeed, officials seem quietly to be planning a “controlled collapse” of the banks' worst debtors, to start later this month. Just how many borrowers will be affected is unclear, but a handful of big construction companies, among others, are expected to go bust. The clean-up could also involve sorting out other big companies in dire financial straits (without officially bankrupting them): one example may be Daiei, the country's biggest supermarket chain, which has ¥2.6 trillion in debts. In a bid to persuade investors, especially foreign ones, that it is serious about reform, the government wants most of this choreographed clean-up finished before deposit insurance is lifted in April.

Officials seem quietly to be planning a “controlled collapse” of the banks' worst debtors

That will not be easy. A mere handful of big bankruptcies would probably be seen as little more than a token gesture of reform, given the numbers of walking dead in Japan. On the other hand, a “controlled” exercise could soon get out of hand. Dealing with Daiei will be particularly tricky. A huge employer, its collapse would have political implications. Daiei is these days considered a test of the government's appetite for painful change.

In little over a year, Daiei has spent the best part of a ¥500 billion credit line, yet it has been unable to stem falling sales. Sanwa Bank, one of the chain's four biggest creditors, is weighing several schemes, including one in which Daiei's main supermarket operation has its debts forgiven, allowing it to survive, but other parts of the group are sold or shut down. Sanwa is under pressure to act quickly, for its exposure to Daiei will double when it merges with Tokai Bank, another lender, in April. It also wants to act before too many jittery suppliers start refusing to do business with Daiei. One problem will be persuading Sumitomo Bank, a third big lender to Daiei with several other costly headaches (eg, two life insurers and a bunch of construction companies), to approve the plans. The alternative is a much uglier outcome for Daiei, and for the dozens of banks from which it has borrowed.

With plenty of weak companies at risk, unforeseen corporate bankruptcies could upset the government's orderliness. The cost of credit has shot up in the wake of recent bankruptcies, putting the viability of many more companies in doubt. External events, too, could prove a trigger. Japan's giant trading houses, for example, worry about Indonesia defaulting on its debt to them, leading to casualties. And officials are concerned about banks' exposure to derivatives issued by Enron, America's spectacularly bust utility, which have yet to be fully assessed.

All the while, regulators have to worry about Japan's own economy, and about the risk that prices of government bonds may fall, damaging banks' huge bond portfolios. This could happen if Japan's sovereign-debt rating falls another notch, which—given the country's worsening finances—could easily happen. Or a sharp fall in the yen (see article) might conceivably lead to capital flight and rising bond yields.

Then again, 2002 could turn out to be yet one more year of government irresolution, in which banks are propped up and not cleaned up. That would be the worst outcome of all.

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The yen

On the slide

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Can a cheaper yen rid Japan of deflation?

THE yen, like the Japanese economy, had little to celebrate in the closing days of 2001. After trading in a range of ¥115-125 to the dollar for most of the year, the currency fell by 7% in December, to ¥132, its lowest for more than three years. A cheaper yen is exactly what Japan needs; but if the slide continues, expect a lot more griping from other Asian governments.

Devaluation is one of the few policy tools left in Japan to fight deflation. Massive public-sector debts, and interest rates near zero, leave little room for further monetary or fiscal stimulus. A weaker yen could boost exports. More important, by raising import prices it could help to curb deflation and so push down real interest rates. Rumours that the Bank of Japan might start buying foreign bonds in order to drive the yen down helped to trigger its recent decline. Since then, the bank has explicitly rejected such a policy. The yen's depreciation appears largely to reflect investors' waning confidence in the Japanese economy, especially its financial system.

The Ministry of Finance, which controls Japan's foreign-exchange reserves, argues that the yen's slide is driven by the market, and that it has no plan to drive the currency down through intervention. The government almost certainly welcomes a weaker yen, but it does not want to be seen to be pursuing an explicit policy of devaluation in the face of increasing complaints from the rest of Asia. Officials from China and South Korea have warned that a depreciation of the yen risks tit-for-tat devaluations in the region, creating economic instability.

China's own concerns are overstated. By most measures, the yuan is significantly undervalued. China's competitiveness is being bolstered by rapid productivity growth. Normally, this would be matched by higher wages or a stronger currency. However, wages are held back by a large pool of surplus labour, and China's partially convertible currency is pegged to the dollar. Even if the yen fell further, China would not need to devalue.

A weaker yen might also have less serious consequences than is commonly believed for other Asian economies. Deutsche Bank reckons that even South Korea, whose exports compete more directly with Japan than do China's, is unlikely to suffer much harm from a weaker yen. The bank argues that when, in 1995-98, the yen fell sharply against the dollar (and hence the Korean won, which was then pegged to the dollar), Japan did not grab any market share away from South Korea. South Korea's exports continued to grow faster than Japan's.

Indeed, adjusting for differences in inflation over time, most Asian currencies still look cheap against the yen. This explains the sharp decline in emerging Asia's trade deficit with Japan, from an annual deficit of $59 billion in 1995-97 to only $19 billion last year.

The problem is that a small devaluation will not put an end to deflation, for Japan's imports account for a mere 10% of GDP. A big devaluation is called for to create inflation. And a devaluation on this scale is far more likely to trigger other devaluations throughout Asia. Since Japan and the rest of Asia account for 30% of world trade, competitive devaluations across the region would also transmit deflationary pressures to America and Europe.

Credit Suisse First Boston uses an economic model to estimate the impact of a fall in the yen of varying amounts. If the yen fell by 10% from its mid-December level, to ¥135-140, then—even assuming no change in other Asian currencies—Japan's inflation rate would remain slightly negative in 2003. If the yen fell by 25%, to ¥150-160, this would be enough to halt deflation in Japan. But the investment bank reckons that other Asian currencies would also fall. Lower import prices would then push inflation dangerously close to zero in America and Europe.

That is not a reason for policymakers to resist a weaker yen. It would be crucial, though, for America and Europe to respond with further monetary easing. If not, Japan's deflation would simply be shuffled elsewhere.

Devaluation is not the solution to Japan's economic woes. Nothing can take the place of the uncomfortable steps needed to clean up the banking system. Still, if devaluation helped to put an end to deflation, it would offer a healthier economic environment in which to carry out the structural and banking reforms that are essential for Japan's recovery.

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20th-century photography

Awestruck

Jan 3rd 2002
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Did Ansel Adams take beautiful photographs or photograph beautiful things? The arguments still rage, as a new exhibition shows

ANSEL ADAMS already has a mountain named after him. Now a second monument is being raised to the great American landscape photographer, who died in 1984. “Ansel Adams at 100”, a landmark travelling exhibition curated by John Szarkowski for the San Francisco Museum of Modern Art, will transfer first to Chicago, then London and Berlin, before returning to America. It will reappear in Los Angeles and, in July 2003, in New York.

Ansel Adams at 100
By John Szarkowski

Bulfinch Press; 192 pages; $150. Little, Brown; £100

Buy it at
Amazon.com
Amazon.co.uk

Adams worshipped landscape, specifically the Rocky Mountains and his beloved Yosemite National Park, where the 11,760-foot (3,618-metre) Mt Ansel Adams was named in 1985. He was one of the first photographers to try and make a living from selling prints rather than from reproduction rights. Above all, he propounded a detailed technical theory which promised that anyone could take good photographs as long as they followed a number of set rules. His books form the basis of a style now disparagingly thought of as “camera club” photography, where the photographer need have little or nothing to say in his images as long as he says it with minute technical precision.

In 1932 Adams and some other like-minded photographers founded Group f/64. The smallest aperture then normally available, which gave the greatest depth of field, was f/64; choosing it implied complete clarity of vision, avoiding emotive effects. By picking that aperture—and the aesthetic it represented—as their title, Group f/64 was making a statement in favour of what its manifesto described as “straight” photography, an unembellished style that contrasted with much that had gone before.

One of the most important earlier styles was Pictorialism, which made much use of soft focus and printing techniques that looked “unphotographic”, and which often borrowed from other art forms, primarily Japanese engraving and certain effects of Impressionist painting. Straight and pictorial photography could hardly be more different; in 1916, when Adams started working, the rivalry between them was intense. At stake was the very status of photography. Was it an art form or merely a technique? If an art form, could it dictate its own terms or must it appropriate the stylistic mannerisms of its rivals, and hence their legitimacy?

The conventional view is that Adams was a convert from Pictorialism, and that it was the pictures of Paul

Strand—born 12 years before Adams in 1890 and widely considered to be the father of artistic photography in America—which persuaded him that photography need not be insecure about its own worth.

What is clear from the current exhibition is how much of a Pictorialist he remained. A surprising proportion of his great pictures are of moments when the light was at its least stable: a break in a storm, or hazy winter sunlight. This wild and emotional sky offered its own Pictorialist light, which Adams used to liberate his straight technique. Long after he had plumped for f/64, he was filling the top half of his pictures with unmistakably painterly swirls of clouds.

Adams wrestled all his life with the big questions in photography: was it neutral observation or an expression of an artist's opinion? His majestic pictures of the western landscape were made to carry a great weight of theory. He believed, in a way that few photographers now do, that certain scenes were properly photogenic. Today the common view is that a great photograph is beautiful even if the object in it is ugly or squalid. Adams would never have countenanced such an idea.

A lifelong involvement with the Sierra Club made Adams into a conservationist as well as a photographer. To him nature was splendid; it would provide all the artistry and emotion he needed, as well as crisp hard textures and infinite detail. Adams's self-defined job was to transmit and defend what was already beautiful in nature, not himself to create beauty. When his pictures are dull, as they can occasionally be, that is the reason. When they're not, they're monumental.

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First marriages

I do, for now

Jan 3rd 2002
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WHEN Pamela Paul married at the age of 27, little did she know that before her first wedding anniversary her husband would be asking for a divorce, leaving her with an empty apartment and an unforgettable book title.

The split led Ms Paul to examine why as many as 25% of first marriages in America fail within two years. The right is keen to hold this up as a sign of moral laxity. The left is largely silent; so, often enough, are the parents, many of whom, being divorced themselves, will make no judgment moral or otherwise about their children's choices “as long as they are happy”.

The Starter Marriage and the Future of Matrimony
By Pamela Paul

Villard Books; 320 pages; $24.95

Buy it at
Amazon.com
Amazon.co.uk

The starter marriage, which lasts only a short time and ends before children begin, is, Ms Paul concludes, a new demographic phenomenon, along with mobile-phone sales and failed dotcom millionaires. Many participants will have spent more time—not to mention money—planning the wedding than they did in the marriage. Divorce, though, was never part of the plan. When it comes, it is traumatic, even if the experience seems to do little to deter most of the participants from marrying again. Marriage, most of them say, is a good thing. Yet if young people have such high hopes of marriage only to fall at the first hurdle, what is going wrong?

Ms Paul, an editor at *American Demographics* and a reviewer for *The Economist*, interviewed more than 60 veterans of starter marriages. Some had married in haste before repenting at leisure, others hoped the journey down the aisle would add fresh zing to an already fading union. None started out with the idea of divorce in mind.

The subject does not lend itself to firm conclusions. One strength of Ms Paul's book is that she does not see the problem as one of over-arching expectations matched by lack of fibre or simple immaturity. Another great virtue is her refusal to be pigeonholed into any simple political agenda. Her book will be a lesson to those contemplating marriage and a comfort to those who falter.

FIAMMETTA ROCCO

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Theodore Roosevelt

King Ted

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FEW readers of Edmund Morris's “The Rise of Theodore Roosevelt”, will be surprised to learn that he has written a highly engaging—if somewhat flawed—second volume. “Theodore Rex”, describing Roosevelt's years as president, from the assassination of William McKinley in 1901 to William Howard Taft's inauguration in 1909, is the more than worthy centrepiece of what will be a distinguished three-volume biography. There is a vogue in America just now for big presidential lives—which Mr Morris, with his 1999 biography of Ronald Reagan, “Dutch”, has done much to create—and this work will further stir that enthusiasm.

Theodore Rex
By Edmund Morris

Random House; 784 pages; $35. To be published in Britain by HarperCollins in March

Buy it at
Amazon.com
Amazon.co.uk

Roosevelt was the most eccentric of American presidents, and one of the ablest; he radiated energy, good humour, warmth and ideas. If not precisely an intellectual, he was intelligent and well-read—a bookworm, in fact—while also a prophet of the strenuous life and the great outdoors. He managed to combine remarkable political adroitness with comprehensive vision. It is startling to see how much his speeches and policies on natural conservation, for instance, anticipated the concerns of today. Perhaps, as president, he never encountered challenges that were fully worthy of his mettle—no civil war, no world wars, no Great Depression—but that was his country's good fortune, and in part his own work, for he was a surprisingly dexterous diplomat. His reputation has rarely been higher than it is today.

He finished building the Panama Canal, supporting the secession of Panama from Colombia to ensure America gained control of the controversial and beleaguered, yet ultimately crucial, project that had been started by Ferdinand de Lesseps. He also pushed through Congress an impressive sheaf of progressive laws. And he did it while cavorting before the people, who loved him and always imagined him, somewhat to his mortification, dressed in cowboy gear. Roosevelt makes a wonderful subject, and not just because of Mr Morris's professional skill.

All the same, this is not quite the book that historians might have hoped for. Among recent biographers, David McCullough, who earlier wrote “The Path Between the Seas”, the definitive account of the building of the Panama Canal, has produced several presidential histories. His books on Harry Truman and John Adams are quite as entertaining and informative as Mr Morris's life of Roosevelt, but they have also fundamentally changed the world's perception of these two men. Mr McCullough established their place in history in a way that no one had ever quite done before, largely due to the skill with which he fills in the context in which they lived. With Mr McCullough we learn about America as well as its presidents. This cannot be said of “Theodore Rex”.

Long books seem to be governed by a law of composition which says that the more detail is piled up, the less we understand. Mr Morris cannot always see the wood for the trees, nor can his readers. Thus whoever wants to know what was on the menu at a White House banquet on May 12th 1908, can find it on pages 514-15: littleneck clams, fresh caviar, strained gumbo, salmon, squabs, ice cream, “fancy cakes” and coffee, not to mention cigars. But nothing is made clear about the Hepburn Act, one of Roosevelt's most important legislative achievements, except that he got it triumphantly through Congress. Only the previously informed will have the slightest idea of its provisions, or of the economic conditions which made it desirable, or even how successful it was. This verdict is all too true of most of Roosevelt's other achievements as chronicled, though not assessed, by Mr Morris.

Nor does Mr Morris fulfil his duty of making a coherent interpretation of the president's character. Roosevelt's personality was so overwhelming that it has swamped his biographer, who presents him as no more than a series of explosions, like rockets on the Fourth of July. There is no fresh interpretation. Much as Roosevelt seemed before Mr Morris went to work, so he seems afterwards—a judgment which it

is painful to proffer on such a subject and such a biographer.

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Victorian values revisited

Family resemblances

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EVER since Lytton Strachey published his stinging portrait of the repressed and hypocritical truth behind the “Eminent Victorians”, those born in the 20th century have tended to feel rather superior towards their 19th-century forefathers. They admire their achievements—railways, epic novels, public sanitation. But their trussed up, sentimental, maudlin inner life—well, quite frankly, they were a mess.

Schnitzler's Century: The Making of Middle-Class Culture 1815-1914
By Peter Gay

Norton; 366 pages; $27.95. Allen Lane, The Penguin Press; 366 pages; £20

Buy it at
Amazon.com
Amazon.co.uk

Such a view is a slanderous misjudgment, says Peter Gay, emeritus professor of history at Yale, whose new book is a witty and sophisticated defence of the Victorian middle class. Not that Mr Gay defends the contemporary notion of Victorian values: censorious prudery or embarrassed euphemisms. He believes that these are “spiteful, largely unfounded legends” that have been used to characterise an amazingly diverse social group.

Puncturing the myth of frigid family relations, so often lazily repeated in television costume dramas, Mr Gay argues that the overriding tendency in bourgeois Victorian life was towards greater intimacy. He paints a novel picture of a British prime minister, William Gladstone, acting like a New-Age healer and helping to relieve his wife's aching breasts, strained after years of child rearing, by gently stroking them. He opens up the pages of the work of J.F. Albrecht, a German physicist who promoted the then novel idea that marital relations must fulfil the needs of both partners, not just errant males. By the middle of the 19th century, supposedly the high-water mark of sexual double standards, his book had gone through six editions.

Instead of the British monarch who gave her name to the Victorian century, Mr Gay suggests a more representative embodiment of the era: Arthur Schnitzler, a Viennese playwright (pictured above). A neurotic figure who was selfishly dedicated to the pleasures of the flesh, Schnitzler shared many of the arrogant assumptions of the European bourgeoisie; but certainly he was no prude. In his correspondence with his mistresses, he discusses contraception, and his diary contains a monthly tally of his orgasms.

Surprisingly, Mr Gay sees the main source of misinformation as the Victorians themselves. We have, he argues, studied too eagerly the bohemian writers who despised their family origins, and who maintained that “hatred of the bourgeois is the beginning of all virtue”. We've also been misled by the pseudo-scientists who caricatured or perhaps tried to manipulate their own society. William Acton's apparently scholarly works on the absence of the sexual feelings in women, for instance, have given too much ammunition to critics of the Victorians.

In his attempt to brighten up the monochrome image of the Victorians, Mr Gay sometimes strays into dubious territory. He unconvincingly excuses the opponents of the British Factory Acts, which improved appalling labour conditions. Yet he writes with a novelist's affection for the middle-class characters he is rescuing from the condescension of posterity: “Within their limits they lived with their eyes wide open.” On matters such as the Victorian concern with aggression, and the need for society to learn how to deal with it, Mr Gay hints that it is we, today, who are the pious hypocrites.

Though many might think that present-day mores can be sharply distinguished from the Victorian psyche, Mr Gay shows how its attitudes and behaviour often looked ahead to those of today. Perhaps it is

time to stop rebelling, as Strachey did, against our historical parents from the last century but one—and to start looking instead for the family resemblance.

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New fiction

Coming together

Jan 3rd 2002
From The Economist print edition

DAVID GROSSMAN is one of Israel's leading authors. Born in Jerusalem in 1954, he writes in Hebrew, but has been widely translated. He has written, to great acclaim, about both the Holocaust and the plight of the Palestinians. In “Be My Knife”, his fifth novel, he seems to turn his back on history and politics and to retreat into a private realm: a married man's obsession with a woman he has only glimpsed and their experiment in long-distance intimacy. But it is no retreat. The questions of identity and definition that he explores here are precisely those that have preoccupied him elsewhere.

Be My Knife
By David Grossman

Farrar, Straus and Giroux; 318 pages; $25.
Bloomsbury; £16.99

Buy it at
Amazon.com
Amazon.co.uk

Most of the book consists of letters written by the man, Yair, to the woman, Miriam, whose replies are only hinted at. The middle section is Miriam's record of their strange love affair. Finally, in a different typeface, comes a live telephone dialogue, and what might, possibly, be a resolution. Significantly, there is no final full stop. Throughout, Mr Grossman likes to leave the reader unsure whether a thing has happened or not. Indeed, the book is about just that: about the reality of the possible, rather than the actual. Facts, says Yair, are only “a momentary coincidence on the surface of a huge sphere crackling with possibilities.” What he wants from his “hallucination” with Miriam is to find the secret pocket where the soul remains undefined—the blind spot, he calls it, the place with no external story. The body is merely a “bureaucracy”: “touch me only in writing”, he says, “leave me written”.

Yair is a seductive philosopher-magician, who spins their relationship out of thin air. As he gradually strips himself down—motifs of undressing, of unpeeling, fill his letters—the tone darkens. Memories and childhood unhappiness are revealed, and phantasmagoric regions open up, culminating in a nightmarish interlude in a kind of womb made from Miriam's letters pasted on to the walls of a red brothel bedroom.

But Mr Grossman's metaphysics go one better than Yair's. As Yair hallucinates, he awakens in Miriam a real capacity for love and with it an impatience with their game. Miriam has never been able to conceive, but during her last phone conversation with Yair, she has a revelation: she believes herself pregnant. An immaculate conception? At the risk of simplifying Mr Grossman's subtleties, Miriam/Mary has made their love flesh, made the possible actual. And it is Yair, the champion of the possible, who is imprisoned by the actual.

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About sponsorship

Léopold Senghor

Jan 3rd 2002
From The Economist print edition

Léopold Sédhar Senghor, the conscience of Africa, died on December 20th, aged 95

AP

AFTER 20 years as president of Senegal Léopold Senghor decided in 1980, without being pushed, to step down. Such an event is unusual in Africa. Indeed, Mr Senghor was the first leader of a modern African nation to retire voluntarily, and few others have since followed his example. It saddened him that to the outside world much of Africa remains a sink, run by greedy men drugged by power. He was appalled that after winning independence from the colonial powers they had copied their faults, creating large arsenals and menacing their neighbours; at the same time despising the western virtues of democracy and toleration.

Speaking the truth occasionally got Mr Senghor into trouble. He put down one attempted coup, and escaped at least one attempt on his life. But most African leaders seemed unperturbed by his views. Yes, it might be true that they ran tough regimes; that was the burden they had to bear. But they had no quarrel with Léopold Senghor. He was their conscience. Importantly, he was also no threat to the great powers of Africa. Senegal is a small country, part of it desert. It has no oil, no diamonds. Peanuts are an important crop. Even for West Africa its climate is testing: humid for six months; dominated by a hot dry wind for the other six. After his retirement Mr Senghor preferred to spend much of the year in the more agreeable climate of Normandy with his French wife, Colette, who is with him in our picture.

Mr Senghor had a lifelong admiration for the French: not of course for their colonialism, he made that clear, but for their culture. As a young man studying at the Sorbonne he wrote a paper on Baudelaire. Mr Senghor's own poetry has won prizes in France and elsewhere. He was the first black man to be elected to the Académie Française, a bastion of French intellectuals. France claimed him for its own. France has lost a friend, said President Chirac last week. Senegal may be one of the humbler states of Africa, but France can view it as a cousin. French is the official language there. The country's legal system is based on France's. Perhaps as a means of distancing himself from the French embrace Mr Senghor propounded the idea of *négritude*, a word he used in an early poem, and which had a wide impact on the French-speaking world.

Black and white

Négritude, or blackness, seeks to glorify the African past and to praise the harmony of traditional African society. It is, said Mr Senghor, “the totality of the cultural values of the black world”. Some whites, while supporting its use as a weapon against colonialism, were bothered by its seeming racism, particularly when Mr Senghor said that African culture could revive “the world that has died of machines and cannons”. Jean-Paul Sartre, a friend of Mr Senghor, argued that *négritude* is “an anti-racist racism”, a well-meaning intervention that left people even more confused. Mr Senghor may have become bored with the semantics and diplomatically said that all cultures contributed to civilisation. He pointed out that while he wore European clothes, much of western popular music was based on African rhythms. He urged his followers to “assimilate, not to be assimilated”.

Léopold Senghor could be said to have been born to mediate. His father was a prosperous merchant in Senegal. His mother came from a nomadic tribe. He said he grew up at the crossroads of Africa “of castes and races”. The Senegal harbours were among the first on the Atlantic coast of Africa to see

European ships. Arab caravans crossed the desert on their way south. Mr Senghor was brought up as a Roman Catholic in a largely Muslim country. The Catholic missionaries taught him well. He won a scholarship to study in France and became a teacher. He taught Latin and French at a school in Tours. Mr Senghor served in the French army in the second world war. He later turned to politics and learnt its rudiments in the French parliament as a deputy from Senegal. He was the obvious choice for president when France granted Senegal independence in 1960.

He could have been a dictator, like some of his contemporaries in the new Africa. The French thoughtfully provided him with a posse of soldiers to put down any possible trouble. But he taught his people democracy, nurtured a thoughtful political opposition to his own party and declined to squash a youthfully impertinent press. He was shocked when a close friend who wanted Senegal to be a one-party state and objected to a Catholic running a Muslim country tried to mount a coup. Mr Senghor sadly locked him up. Unfortunately, he said, “a country cannot be governed without prison walls”.

Mr Senghor did his best to get on with the United States, and was the first African leader to receive Peace Corps volunteers. He resisted Russian attempts to woo him in the cold war. He was hurt when on a visit to Washington to receive a literary prize he was told the president was too busy to see him.

Léopold Senghor was 74 when he retired. Well, he said, he was not retiring exactly. He still had things to say. He was still a teacher and a poet. “Poets”, wrote Shelley, “are the unacknowledged legislators of the world.”

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Overview

Jan 3rd 2002
From The Economist print edition

America's economic outlook brightened on better news from manufacturers and consumers. The Institute for Supply Management's (formerly known as the National Association of Purchasing Management) index of factory activity climbed to 48.2 in December, from 44.5 in November. But a number below 50 indicates that overall manufacturing activity is still shrinking, as it has been since August 2000. However, there were other encouraging signs; ISM surveys of new orders and production showed growth for the first time since September.

American consumers are expecting better times ahead. The Conference Board's index of consumer confidence rose to 93.7 in December, from a revised 84.9 in November. The index, based on a survey of 5,000 households, had fallen for the previous five consecutive months.

Euro notes and coins became legal tender in the 12 euro-area countries on January 1st. The next day, the euro chalked up a record one-day gain against the pound, surging by more than 2%.

Money-supply growth in the **euro area** accelerated to an 8.0% annual rate in November. French unemployment rose to 9.0% in November, up by 0.1% from the previous month. In the year to November, producer prices fell by 1.3% in Italy, and by 2.3% in France, thanks partly to lower energy costs. Consumer prices in Germany rose by 1.7% in the year to December.

Bankruptcies and lay-offs continue to take their toll in **Japan**. Unemployment rose to a record high of 5.5% in November, up from 5.4% in October: 3.5m workers are now without jobs. Japanese industrial production plunged by 13.1% in the 12 months to November, sliding to its lowest level in 14 years. Deflation continued, with consumer prices falling by 1.0% over the year to November.

Britain's trade deficit held steady in October at $3.4 billion, up only slightly from the previous month. Trade with the European Union, showed a widening deficit, due partly to sterling's strength against the euro. This was offset by a shrinking trade deficit with America.

Canada's consumer prices are being chilled across the board by America's economic freeze. Inflation in the year to November fell to 0.7%, the lowest in 42 years, confirming fears that the economy may be in recession.

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Output, demand and jobs

Jan 3rd 2002
From The Economist print edition

% change at annual rate

	GDP		The Economist poll GDP forecasts		Industrial production	Retail sales (volume)	Unemployment % rate	
	1 qtr	1 year	2001	2002	latest	latest	latest	year ago
Australia	+ 4.6	+ 2.5 Q3	+ 2.1	+ 3.2	– 0.4 Q2	+ 5.8 Q3	6.7 Nov	6.3
Austria	+ 0.2	+ 1.2 Q2	+ 1.4	+ 1.1	– 1.3 Oct	– 4.8 Sep	4.0 Oct	3.5
Belgium	– 1.2	+ 0.9 Q3	+ 1.3	+ 1.1	+ 0.2 Oct*	– 2.5 Oct	10.8 Nov*	10.7
Britain	+ 1.7	+ 2.2 Q3	+ 2.2	+ 1.7	– 4.2 Oct	+ 7.1 Nov	5.1 Oct†	5.5
Canada	– 0.8	+ 0.8 Q3	+ 1.4	+ 1.2	– 6.0 Oct**	– 0.9 Sep	7.5 Nov	6.9
Denmark	+ 3.5	+ 1.4 Q3	+ 1.2	+ 1.3	nil Oct	– 0.7 Sep	5.0 Oct	5.5
France	+ 1.9	+ 2.0 Q3	+ 2.0	+ 1.2	– 0.3 Oct	– 1.3 Oct	9.0 Nov	9.1
Germany	– 0.6	+ 0.3 Q3	+ 0.7	+ 0.7	– 4.0 Oct	+ 1.1 Oct	9.5 Nov††	9.3
Italy	+ 0.6	+ 1.9 Q3	+ 1.8	+ 1.1	+ 0.9 Oct	– 0.3 Oct	9.4 Jul	10.5
Japan	– 2.2	– 0.5 Q3	– 0.6	– 0.8	–13.1 Nov	– 2.1 Sep	5.5 Nov	4.8
Netherlands	– 1.4	+ 0.4 Q3	+ 1.0	+ 1.1	– 6.3 Oct	– 2.4 Sep	2.0 Nov§	2.6
Spain	+ 1.1	+ 2.8 Q3	+ 2.6	+ 1.8	+ 3.0 Oct	na	12.9 Oct	13.6
Sweden	+ 0.2	+ 0.4 Q3	+ 1.6	+ 1.6	– 5.7 Oct	+ 2.1 Oct	3.7 Nov*	3.9
Switzerland	+ 0.1	+ 0.8 Q3	+ 1.6	+ 0.9	+ 1.9 Q3*	+ 4.8 Oct	2.1 Nov*	1.8
United States	– 1.1	+ 0.6 Q3	+ 1.0	+ 0.6	– 5.9 Nov	+ 5.4 Nov	5.7 Nov	4.0
Euro area	+ 0.4	+ 1.3 Q3	+ 1.5	+ 1.0	– 2.7 Oct	+ 1.8 Sep	8.4 Oct	8.5
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*							
Finland	+ 5.0	nil Q3	na	na	– 4.9 Nov	+ 3.3 Sep	8.8 Nov*	8.7
Greece	na	+ 4.4 Q3	na	na	+ 2.0 Oct*	+ 7.5 Sep	na	na
Iceland	na	+ 3.62000	na	na	+ 2.5 2000	na	1.4 Oct	1.1
Ireland	na	+ 9.2 Q2	na	na	– 5.8 Oct	+ 3.2 Oct	4.1 Nov	3.7
Luxembourg	na	+ 8.52000	na	na	+ 7.8 Sep	+ 9.5 Aug	2.7 Oct	2.5
New Zealand	+ 2.8	+ 2.1 Q3	na	na	+ 3.5 Q2*	+ 6.3 Q3	5.2 Q3	5.8
Norway	+ 3.8	+ 1.9 Q3	na	na	– 2.0 Oct	+ 5.4 Nov	3.6 Q3	3.5
Portugal	+ 1.6	+ 2.5 Q2	na	na	– 1.0 Oct	+ 3.3 Oct	4.0 Q3	4.0

*Not seasonally adjusted. †Aug-Oct; claimant count rate 3.2% in Nov. §Sep-Nov. **New series. ††EU harmonised rate 8.0% in Nov.

Text refers only to the first 16 countries listed

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Prices and wages

Jan 3rd 2002
From The Economist print edition

% change at annual rate

	Consumer prices* latest		Consumer prices* year ago	The Economist poll consumer prices forecast 2001	2002	Producer prices* latest		Producer prices* year ago	Wages/earnings latest		Wages/earnings year ago
Australia	+ 2.5	Q3	+ 6.1	+ 4.2	+ 2.4	+ 2.4	Q3	+ 7.2	+ 4.0	Q3	+ 6.5
Austria	+ 2.0	Nov	+ 3.1	+ 2.5	+ 1.5	– 1.5	Nov	+ 5.7	+ 2.7	Nov	+ 2.2
Belgium	+ 2.2	Dec	+ 2.5	+ 2.5	+ 1.6	– 2.9	Oct	+12.0	+ 3.1	Q4	+ 1.6
Britain	+ 0.9	Nov	+ 3.2	+ 2.0	+ 2.1	– 1.0	Nov	+ 2.7	+ 4.4	Oct	+ 4.2
Canada	+ 0.7	Nov	+ 3.2	+ 2.6	+ 1.7	– 1.0	Oct	+ 4.8	+ 2.4	Oct	+ 2.4
Denmark	+ 1.9	Nov	+ 2.6	+ 2.3	+ 1.9	– 1.2	Nov	+ 6.7	+ 4.3	Q3	+ 3.8
France	+ 1.2	Nov	+ 2.2	+ 1.7	+ 1.2	– 2.3	Nov	+ 6.3	+ 4.1	Q3	+ 5.3
Germany	+ 1.7	Dec	+ 2.2	+ 2.5	+ 1.2	– 1.9	Nov	+ 6.4	+ 2.2	Oct	+ 2.2
Italy	+ 2.4	Nov	+ 2.7	+ 2.7	+ 1.6	– 1.3	Nov	+ 6.7	+ 2.8	Nov*	+ 1.8
Japan	– 1.0	Nov	– 0.8	– 0.7	– 0.8	– 0.8	Nov	+ 0.4	– 0.8	Nov*	nil
Netherlands	+ 4.2	Nov	+ 3.0	+ 4.7	+ 2.1	– 0.9	Oct	+ 9.2	+ 4.6	Oct	+ 3.3
Spain	+ 2.7	Nov	+ 4.1	+ 3.7	+ 2.3	– 0.4	Oct	+ 5.9	+ 3.6	Q3†	na
Sweden	+ 2.7	Nov	+ 1.7	+ 2.4	+ 1.9	– 0.9	Nov	+ 4.8	+ 3.3	Sep*	+ 3.9
Switzerland	+ 0.3	Nov	+ 1.9	+ 1.0	+ 0.6	– 2.0	Nov	+ 3.0	+ 1.3	2000	+ 0.3
United States	+ 1.9	Nov	+ 3.4	+ 2.9	+ 1.6	– 1.1	Nov	+ 3.8	+ 3.9	Nov	+ 4.2
Euro area	+ 2.1	Nov	+ 2.9	+ 2.6	+ 1.5	– 0.6	Oct	+ 6.6	+ 3.0	Q2	+ 2.3
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*										
Finland	+ 1.6	Nov	+ 3.3	na	na	– 4.4	Nov	+ 8.8	+ 4.5	Q3*	+ 4.9
Greece	+ 2.4	Nov	+ 4.2	na	na	+ 1.7	Sep	+ 9.2	na		na
Iceland	+ 8.6	Dec	+ 4.2	na	na	+ 8.4	Dec	+ 3.5	+ 9.4	Nov	+ 7.6
Ireland	+ 3.8	Nov	+ 7.0	na	na	+ 0.5	Nov	+ 5.9	+ 8.7	Q3*	+ 7.4
Luxembourg	+ 2.1	Nov	+ 3.7	na	na	+ 0.9	Sep	+ 6.1	+ 3.4	Aug*	+ 7.0
New Zealand	+ 2.4	Q3	+ 3.0	na	na	+ 6.2	Q3	+ 8.4	+ 2.0	Q3	+ 1.5
Norway	+ 1.8	Nov	+ 3.2	na	na	–23.2	Nov	+ 6.6	+ 4.6	Q3*	+ 4.2
Portugal	+ 3.9	Nov	+ 3.8	na	na	– 7.9	Nov	+16.8	+ 2.4	Apr*	na

*Not seasonally adjusted. †New series.

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Employer notice periods

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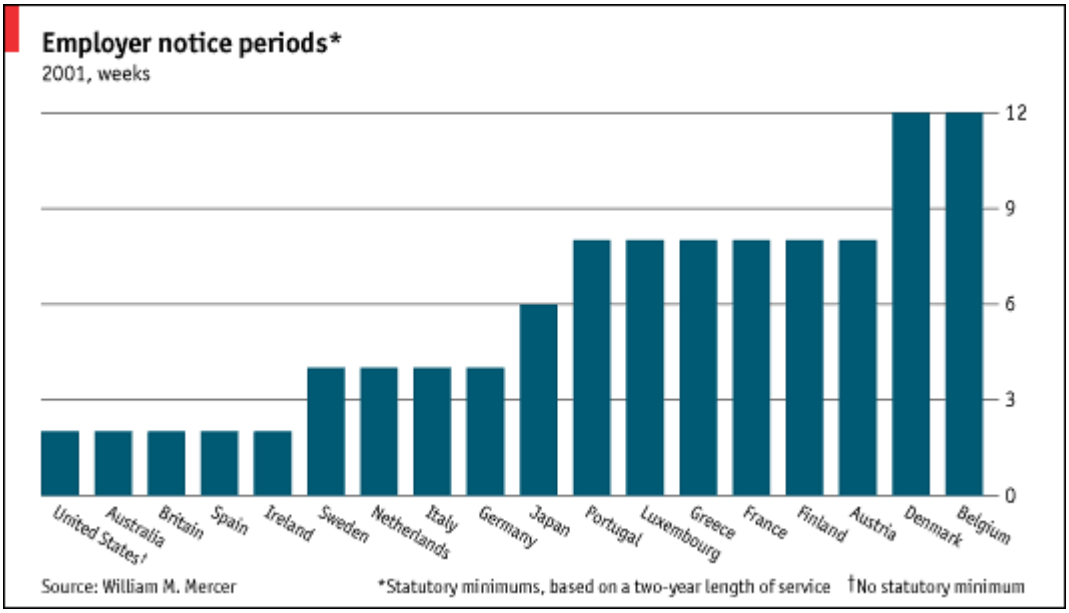

Statutory notice periods vary widely around the world. They range from 12 weeks in Belgium and Denmark to two weeks in Britain. The shorter the required period, the more flexible the labour market will be. But the minimum legal notice period in any country is only one measure of its labour-market flexibility, since employers' ability to shed labour promptly will also depend a lot on the strength of trade unions.

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Money and interest rates

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From The Economist print edition

	Money supply* % change on year ago			Interest rates % p.a. (Jan 2nd 2002)					
				3-mth money market		2-year	10-year gov't bonds		corporate
	narrow	broad		latest	year ago	gov't bonds	latest	year ago	bonds§
Australia	+21.1	+14.0	Nov	4.25	6.02	4.42	5.91	5.33	6.97
Britain	+ 7.8	+ 8.1	Nov	4.00	5.83	4.67	4.99	4.66	6.16
Canada	+15.4	+ 4.9	Nov	1.92	5.45	3.25	5.46	5.40	7.05
Denmark	+ 7.8	+ 6.4	Nov	3.75	5.35	4.08	5.07	5.00	7.10
Japan	+12.9	+ 3.2	Nov	0.02	0.45	0.05	1.35	1.65	1.40
Sweden	+ 7.3	+ 4.9	Oct	3.65	4.11	4.35	5.23	4.68	5.26
Switzerland	+ 1.9	+ 4.8	Nov	1.83	3.32	2.51	3.47	3.38	4.39
United States	+ 6.5	+14.0	Nov	1.77	6.32	3.21	5.16	5.12	6.91
Euro area†	+ 6.1	+ 8.0	Nov	3.28	4.72	3.55	4.89	4.66	5.41

*Narrow: M1 except Britain and Sweden M0, broad: M2 or M3 except Britain M4. † Germany for bonds. § Latest available. Benchmarks: US 30-year 5.52%, Japan No.235 1.33%. Central bank rates: US fed funds 1.75%, ECB refinancing 3.25%, BOJ overnight call 0.001%, BOE repo 4.00%. Sources: Commerzbank, Danske Bank, J.P. Morgan Chase, Royal Bank of Canada, OM Fixed Income Exchange, UBS Warburg, DRI-WEFA, Westpac, Thomson Financial Datastream. Rates cannot be construed as banks' offers.

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The Economist commodity price index

Jan 3rd 2002
From The Economist print edition

1995=100

	Dec 18th	Dec 25th	Jan 1st*	% change on one month	% change on one year
Dollar index					
All items	65.6	65.4	65.3	– 0.8	–10.2
Food	67.6	67.3	67.2	– 1.4	– 7.4
Industrials					
All	62.7	62.8	62.7	+ 0.1	–14.0
Nfa†	60.0	59.7	59.3	+ 2.4	–10.9
Metals	65.0	65.5	65.6	– 1.5	–16.2
Sterling index					
All items	71.0	71.7	70.8	– 3.1	– 7.7
Euro index					
All items	95.6	96.9	96.5	– 0.7	– 4.4
Yen index					
All items	89.2	90.1	91.1	+ 4.7	+ 2.8
Gold					
$ per oz	279.35	277.70	276.80	+ 0.2	+ 2.3
West Texas Intermediate					
$ per barrel	19.37	18.59	20.59	+ 6.1	–24.5

* Provisional † Non-food agriculturals

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Stockmarkets

Jan 3rd 2002
From The Economist print edition

Market indices

	Jan 2nd	2001-02 high	2001-02 low	% change on one week	% change on record high	% change on Dec 31st 2000 in local currency	% change on Dec 31st 2000 in $ terms
Australia (All Ordinaries)	3,384.5	3,425.2	2,867.4	+ 1.7	- 1.2	+ 7.3	- 0.9
Austria (ATX)	1,133.2	1,245.8	1,014.3	+ 0.5	-34.8	+ 5.6	+ 1.7
Belgium (Bel 20)	2,728.6	3,030.4	2,322.6	+ 1.2	-25.9	- 9.8	-13.1
Britain (FTSE 100)	5,218.3	6,334.5	4,433.7	+ 0.8	-24.7	-16.1	-18.8
Canada (Toronto Composite)	7,646.8	9,348.4	6,513.1	+ 1.2	-32.9	-14.4	-19.5
Denmark (KBX)	225.8	294.3	197.8	+ 3.5	-25.2	-14.7	-17.6
France (SBF 250)	2,959.1	3,820.2	2,335.3	+ 1.7	-32.6	-21.5	-24.4
(CAC 40)	4,580.4	5,998.5	3,652.9	+ 1.7	-33.8	-22.7	-25.6
Germany (Xetra DAX)	5,167.9	6,795.1	3,787.2	+ 3.0	-35.9	-19.7	-22.6
Italy (BCI)	1,431.3	1,948.4	1,082.9	+ 3.4	-34.4	-25.3	-28.1
Japan (Nikkei 225)	10,542.6§	14,529.4	9,504.4	+ 3.4	-72.9	-23.5	-33.9
(Topix)	1,032.1§	1,441.0	863.4	+ 3.8	-64.2	-19.6	-30.5
Netherlands (AEX)	497.5	642.3	396.2	+ 0.5	-29.1	-22.0	-24.9
Spain (Madrid SE)	823.1	963.9	648.6	+ 0.7	-28.2	- 6.5	-10.0
Sweden (Affarsvarlden Gen)	227.6	293.1	177.5	+ 1.2	-43.1	-18.0	-24.6
Switzerland (Swiss Market)	6,372.3	8,135.4	5,110.2	+ 0.1	-24.2	-21.7	-22.6
United States (DJIA)	10,073.4	11,337.9	8,235.8	- 0.1	-14.1	- 6.6	- 6.6
(S&P 500)	1,154.7	1,373.7	965.8	+ 0.5	-24.4	-12.5	-12.5
(Nasdaq Comp)	1,979.3	2,859.2	1,423.2	+ 0.9	-60.8	-19.9	-19.9
Europe (FTSE Eurotop 300)*	1,243.1	1,545.5	998.9	+ 0.2	-27.1	-18.9	-21.9
Euro area (FTSE Ebloc 100)*	1,099.3	1,404.1	843.6	+ 1.6	-29.1	-21.0	-24.0
World (MSCI)†	1,006.5	1,249.2	856.6	+ 1.5	-30.5	na	-17.6
World bond market (Salomon)‡	440.5	461.7	420.6	+ 0.7	- 4.2	na	- 0.8

*In euro terms. †Morgan Stanley Capital International index includes individual markets listed above plus eight others, in dollar terms. ‡Schroder Salomon Smith Barney World Government Bond Index, total return, in dollar terms. §Dec 28th.

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About sponsorship

Trade, exchange rates and budgets

Jan 3rd 2002
From The Economist print edition

	Trade balance*, $bn latest 12 months		Current account $bn latest 12 mths		The Economist poll % of GDP, forecast 2001	2002	Exchange rate trade-weighted† Jan 2nd	year ago	Currency units per $ Jan 2nd	year ago	per £	per euro	per ¥100	Budget balance % of GDP 2001‡
Australia	+ 2.1	Oct	– 8.5	Q3	– 2.5	– 3.1	73.2	75.1	1.95	1.78	2.82	1.76	1.48	0.1
Austria	– 4.6	Sep	– 4.6	Oct	– 2.6	– 2.4	100.6	100.5	15.2	14.6	22.0	13.8	11.5	nil
Belgium	+ 11.0	Oct	+ 12.4	Sep	+ 4.0	+ 4.2	99.4	99.4	44.6	42.7	64.5	40.3	33.8	nil
Britain	– 47.2	Oct	– 17.7	Q3	– 1.7	– 2.2	106.1	105.5	0.69	0.66	–	0.63	0.52	1.1
Canada	+ 43.0	Oct	+ 23.9	Q3	+ 2.9	+ 1.9	75.5	79.4	1.60	1.50	2.31	1.44	1.21	2.8
Denmark	+ 7.4	Oct	+ 4.9	Oct	+ 2.2	+ 1.8	102.7	102.1	8.23	7.89	11.9	7.44	6.23	2.0
France	+ 0.9	Oct	+ 22.8	Oct	+ 1.4	+ 1.4	102.1	102.2	7.26	6.94	10.5	6.56	5.49	-1.5
Germany	+ 69.4	Oct	– 6.8	Oct	– 0.7	– 0.4	99.3	99.1	2.16	2.07	3.13	1.96	1.64	-2.5
Italy	+ 4.9	Oct	– 4.6	Sep	– 0.2	nil	72.9	72.9	2,142	2,048	3,097	1,936	1,621	-1.4
Japan	+ 74.9	Oct	+ 89.2	Oct	+ 2.7	+ 1.9	127.1	143.7	132	114	191	119	–	-6.4
Netherlands	+ 19.3	Oct	+ 11.1	Q3	+ 3.9	+ 4.0	98.4	98.4	2.44	2.33	3.53	2.20	1.84	1.1
Spain	– 38.4	Sep	– 15.1	Sep	– 2.5	– 2.4	74.5	74.5	184	176	266	166	139	nil
Sweden	+ 12.5	Nov	+ 5.8	Oct	+ 2.2	+ 2.1	75.8	78.9	10.26	9.46	14.8	9.28	7.77	3.8
Switzerland	+ 0.7	Nov	+ 25.4	Q3	+10.6	+11.0	112.0	109.1	1.64	1.61	2.37	1.48	1.24	na
United States	–438.9	Oct	–430.7	Q3	– 4.1	– 3.9	121.9	112.6	–	–	1.45	0.90	0.76	0.6
Euro area	+ 24.9	Oct	– 31.2	Oct	– 0.3	– 0.2	80.0	81.0	1.11	1.06	1.60	–	0.84	-1.2
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*													
Finland	+ 13.0	Oct	+ 8.4	Oct	na	na	78.7	78.3	6.59	6.29	9.53	5.96	4.99	3.7
Greece	– 7.3	Sep	– 7.3	Jun	na	na	57.7	57.6	378	360	547	342	286	0.2
Iceland	– 0.2	Oct	– 0.7	Q3	na	na	na	na	101	84.2	146	91.3	76.4	-0.2
Ireland	+ 31.8	Oct	– 1.5	Q2	na	na	88.0	88.2	0.87	0.83	1.26	0.79	0.66	3.2
Luxembourg	– 2.8	Sep	+ 1.2	Q2	na	na	99.4	99.4	44.7	42.7	64.6	40.4	33.8	5.3
New Zealand	+ 0.3	Oct	– 0.2	Q3	na	na	81.8	80.7	2.40	2.24	3.47	2.17	1.82	1.3
Norway	+ 25.8	Nov	+ 26.1	Sep	na	na	96.1	92.4	8.86	8.77	12.8	8.01	6.71	14.3
Portugal	– 12.9	Sep	– 10.5	Sep	na	na	89.6	89.6	222	212	321	201	168	-1.7

*Merchandise. Australia, Britain, France, Canada, Japan and United States imports fob, exports fob. All others cif/fob. †1990=100, Bank of England. ‡OECD estimate.

Text refers only to the first 16 countries listed

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Government bonds

Jan 3rd 2002
From The Economist print edition

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Overview

Jan 3rd 2002
From The Economist print edition

As **Argentina** appointed its third president within a fortnight, following widespread public protest, a devaluation of the peso looked increasingly likely. The peso, which has been fixed one-to-one to the dollar for more than a decade, is trading at 1.40 to the dollar on the black market. However, there is little sign of contagion affecting other emerging-market currencies.

Singapore's GDP grew at an annual rate of 4.3% in the fourth quarter, after three consecutive quarters of contraction; but output was still 7.0% lower than a year earlier. **Hong Kong**'s consumer prices fell by 1.4% in the 12 months to November.

India's GDP growth quickened to 5.3% in the year to the third quarter, largely thanks to faster growth in farm output. Inflation rose to 4.9% in the 12 months to November.

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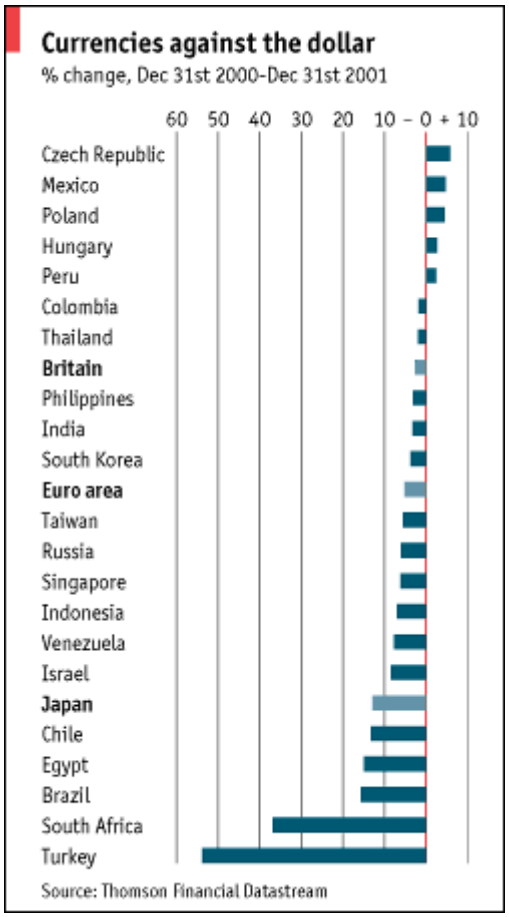
Currencies against the dollar

Jan 3rd 2002
From The Economist print edition

Despite the sharp slowdown in America's economy, at the end of 2001 the dollar was stronger against most of the currencies in our chart than it had been a year earlier. The pound slipped by 2.6% against the greenback, the euro lost 5.2%, and the yen slid by 12.9%. Most economists expect the euro to pick up ground in 2002—but they said that last year, too. Turkey's lira had an especially bad year, losing more than 50% of its value against the dollar, thanks mainly to the country's financial crisis in January 2001.



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Economy

Jan 3rd 2002
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	% change on year earlier						Latest 12 months, $bn				Foreign reserves* $bn, latest	
	GDP		Industrial production		Consumer prices		Trade balance		Current account			
China	+ 7.0	Q3	+ 7.9	Nov	– 0.3	Nov	+20.9	Nov	+20.5	2000	199.3	Sep
Hong Kong	– 0.3	Q3	– 0.1	Q2	– 1.4	Nov	–12.1	Oct	+ 8.8	Q3	112.3	Nov
India	+ 5.3	Q3	+ 1.9	Oct	+ 4.9	Nov	– 6.2	Oct	– 0.7	Q3	44.0	Nov
Indonesia	+ 3.5	Q3	+ 3.2	Q2	+12.6	Dec	+25.4	Nov	+ 4.0	Q3	28.0	Nov
Malaysia	– 1.3	Q3	– 9.0	Oct	+ 1.5	Nov	+14.5	Nov	+ 7.5	Q2	25.4	Sep
Philippines	+ 2.9	Q3	– 1.1	Sep	+ 4.4	Nov	+ 3.4	Oct	+ 5.1	Aug	12.3	Sep
Singapore	– 7.0	Q4	–13.6	Nov	– 0.2	Nov	+ 4.5	Nov	+22.1	Q3	76.8	Nov
South Korea	+ 1.8	Q3	+ 4.9	Nov	+ 3.2	Dec	+10.8	Nov	+ 9.9	Nov	100.4	Oct
Taiwan	– 4.2	Q3	– 6.7	Oct	– 1.1	Nov	+15.6	Nov	+16.2	Q3	122.2	Dec
Thailand	+ 1.5	Q3	+ 0.1	Nov	+ 0.8	Dec	+ 2.3	Nov	+ 6.1	Nov	32.4	Oct
Argentina	– 0.5	Q2	–10.4	Nov	– 1.6	Nov	+ 5.6	Nov	– 8.4	Q2	18.1	Oct
Brazil	+ 0.3	Q3	– 3.4	Oct	+ 9.2	Nov	+ 1.6	Nov	–25.4	Oct	37.5	Oct
Chile	+ 2.6	Q3	+ 4.9	Oct	+ 3.1	Nov	+ 1.6	Nov	– 1.7	Q3	14.3	Oct
Colombia	+ 1.0	Q3	– 0.8	Sep	+ 7.8	Nov	+ 0.8	Sep	– 0.7	Q2	10.0	Oct
Mexico	– 1.6	Q3	– 4.3	Oct	+ 5.4	Nov	– 9.5	Oct	–16.6	Q3	43.4	Oct
Peru	+ 2.2	Oct	+ 2.6	Oct	– 0.1	Dec	– 0.3	Oct	– 1.4	Q3	8.7	Sep
Venezuela	+ 2.8	Q3	+ 3.2	Aug	+12.7	Nov	+13.7	Q3	+ 4.4	Q4	9.3	Oct
Egypt	+ 6.5	2000†	+ 9.4	2000†	+ 2.1	Sep	– 8.8	Jul	nil	Q2	13.5	Aug
Israel	– 2.7	Q3	– 7.3	Oct	+ 1.4	Nov	– 6.9	Nov	– 1.4	Q2	23.0	Nov
South Africa	+ 0.1	Q3	+ 6.5	Oct	+ 4.3	Nov	+ 4.8	Nov	+ 0.3	Q3	6.1	Oct
Turkey	– 7.1	Q3	–13.5	Oct	+67.3	Nov	–15.8	Sep	– 0.4	Sep	19.0	Oct
Czech Republic	+ 3.2	Q3	+ 4.1	Oct	+ 4.2	Nov	– 3.2	Oct	– 2.6	Q3	14.3	Nov
Hungary	+ 3.7	Q3	+ 2.4	Oct	+ 7.1	Nov	– 1.8	Nov	– 0.8	Nov	11.7	Oct
Poland	+ 0.8	Q3	– 0.8	Nov	+ 3.6	Nov	–11.8	Nov	– 7.2	Nov	28.0	Oct
Russia	+ 4.9	Q3	+ 4.7	Nov	+18.8	Nov	+54.8	Oct	+44.6	Q2	33.3	Nov
MORE COUNTRIES	Data for the countries below are not provided in printed editions of *The Economist*											
Pakistan	+ 3.3	2001†	+ 5.0	Jul	+ 2.7	Nov	– 1.1	Oct	+ 0.3	2001†	2.4	Oct
Saudi Arabia	+ 4.5	2000§	na		– 0.5	Sep	+50.9	2000	+15.6	2000	17.1	Oct

*Excluding gold, except Singapore; IMF definition. †Year ending June. § Economist Intelligence Unit estimate.

Text refers only to the first 25 countries listed

Sources: National statistics offices, central banks and stock exchanges; Thomson Financial Datastream; Economist Intelligence Unit; Reuters; Warburg Dillon Read; J.P Morgan Chase; Hong Kong Monetary Authority; Centre for Monitoring Indian Economy; FIEL; EFG-Hermes; Bank Leumi Le-Israel; Standard Bank Group; Garanti Bank; Deutsche Bank; *Russian Economic Trends*.

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Financial markets

Jan 3rd 2002
From The Economist print edition

	Currency units			Interest rates	Stockmarkets	% change on		
	per $		per £	short-term	Jan 2nd		Dec 31st 2000	
	Jan 2nd	year ago	Jan 2nd	% p.a.		one week	in local currency	in $ terms
China	8.28	8.28	12.0	na	1,712.5**	+0.8	-21.9	-21.9
Hong Kong	7.80	7.80	11.3	2.00	11,350.9	+1.3	-24.8	-24.8
India	48.2	46.7	69.7	6.71	3,269.2	+2.9	-17.7	-20.3
Indonesia	10,415	9,550	15,063	17.97	383.5	+1.5	-7.9	-14.4
Malaysia	3.80	3.80	5.50	3.25	682.8	+0.5	+0.5	+0.5
Philippines	51.7	51.0	74.8	11.31	1,169.6	+2.1	-21.7	-24.3
Singapore	1.85	1.73	2.68	1.19	1,625.7	+2.4	-15.6	-21.0
South Korea	1,312	1,271	1,898	4.87	725.0	+10.9	+43.7	+38.5
Taiwan	35.0	33.1	50.6	2.60	5,600.1	+3.9	+18.0	+11.6
Thailand	44.2	43.6	63.9	2.75	305.2	+0.2	+13.4	+11.3
Argentina	1.00	1.00	1.45	na	323.7	+1.0	-22.4	-22.5
Brazil	2.30	1.94	3.33	19.05	13,872.1	+3.8	-11.1	-24.7
Chile	654	574	947	5.55*	5,404.4	+0.1	+11.0	-2.7
Colombia	2,290	2,231	3,312	11.36	1,040.8	+6.4	na	na
Mexico	9.11	9.83	13.2	7.35	6,410.1	+0.6	+13.4	+19.7
Peru	3.44	3.52	4.98	2.98	1,180.2	+1.3	-2.3	+0.1
Venezuela	760	699	1,098	13.00	6,565.3	+2.2	-3.4	-11.0
Egypt	4.59	3.88	6.64	7.22	5,313.5	+1.0	-30.6	-41.2
Israel	4.45	4.09	6.43	2.22	464.3	+6.6	-6.1	-14.6
South Africa	12.3	7.50	17.7	9.75	10,624.1	+3.0	+27.6	-21.2
Turkey	1,445,500	666,120	2,090,627	57.00	14,078.0	+7.7	+49.2	-30.8
Czech Republic	35.1	37.3	50.8	4.61	387.8	-0.9	-19.0	-13.2
Hungary	271	280	392	9.65	7,123.3	-0.6	-9.3	-5.4
Poland	3.94	4.11	5.70	11.82	13,995.2	+2.0	-21.6	-17.8
Russia	30.5	28.6	44.1	25.00	258.8†	+2.7	+92.2	+80.6
EMF (MSCI)‡	1.00	1.00	1.45	na	317.5**	+2.6	na	-4.9
EMBI+§	1.00	1.00	1.45	na	202.1	+1.9	na	+0.1

*Inflation adjusted. **Dec 31st. †In $ terms, Dec 29th. ‡Emerging Markets Free. §J.P. Morgan Chase's Emerging Markets Bond Index Plus.
Sources: National statistics offices, central banks and stock exchanges; Thomson Financial Datastream; Economist Intelligence Unit; Reuters; Warburg Dillon Read; J.P Morgan Chase; Hong Kong Monetary Authority; Centre for Monitoring Indian Economy; FIEL; EFG-Hermes; Bank Leumi Le-Israel; Standard Bank Group; Garanti Bank; Deutsche Bank; *Russian Economic Trends*.

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